



Daily Science Report

10/22/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1601
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1601
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sat 22 Oct

The Vessel started the day Alongside Berth #3 Arica, Chile Mobilizing for MGL1610 and this continued throughout the day. All Science Crew, PSO, and Science Party arrived on-board. Also took delivery of the two Shipments from Geomar (OBS & Wave Glider)

1. Weather (Wind) now going into the DP
2. Secondary GPS now going into the DP
3. Primary SEAL Seismic Recording System operational - working on Backup.
4. Ran out CTD wire and tested Winch.
5. Installed Spectra Lic.
6. Hooked up and Test All GCM's on Source Sub-Arrays.
7. Started Welding/Securing of Hydraulic Piping under the streamer Deck
8. Relocated Big-Eye from to of Bird Lab to MMO Tower
9. Confirmed Phone and monitor operational in MMO Tower
10. Setup EM122 workstation with a Fixed IP address of 102.168.3.136
11. Recieved Shipments of GCM (3) and SSCU (1) S/N 0165
12. Staging of both SIO and Geomar OBS equipment on deck
13. Changing out of Source Sub-Array Hang Plates.


All Science Crew, PSO, and Science Party Arrived on-board.

Daily Comment Summaries - Plan for Tomorrow

Sat 22 Oct

The Vessel will start the day Continuing to Mobilizing for MGL1610 alongside Berth #3 Arica, Chile. At ~17:00 UTC the vessel is expect to get under way for the MGL1610 mission site.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
 Mob Ashore	MB_MA	Sat 22. Oct 00:00	Sat 22. Oct 24:00	24.000
Mobilising Alongside Berth #3 Arica Chile				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

22-Oct	Hours	% Percent
Mobilisation	24.000	100.000
Mob Ashore	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Mobilisation	24.000	100.000
Mob Ashore	24.000	100.000
Total	24.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 22 Oct

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
Primary Seal Recording System is operational, working on Secondary System.

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Miscellaneous:
No Major Issues to Report



10/22/2016

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Daily Comment Summaries - Personnel Onboard

Sat 22 Oct

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Hernandez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisi GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Accpt km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
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Production Totals (Accpt km) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Infill	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

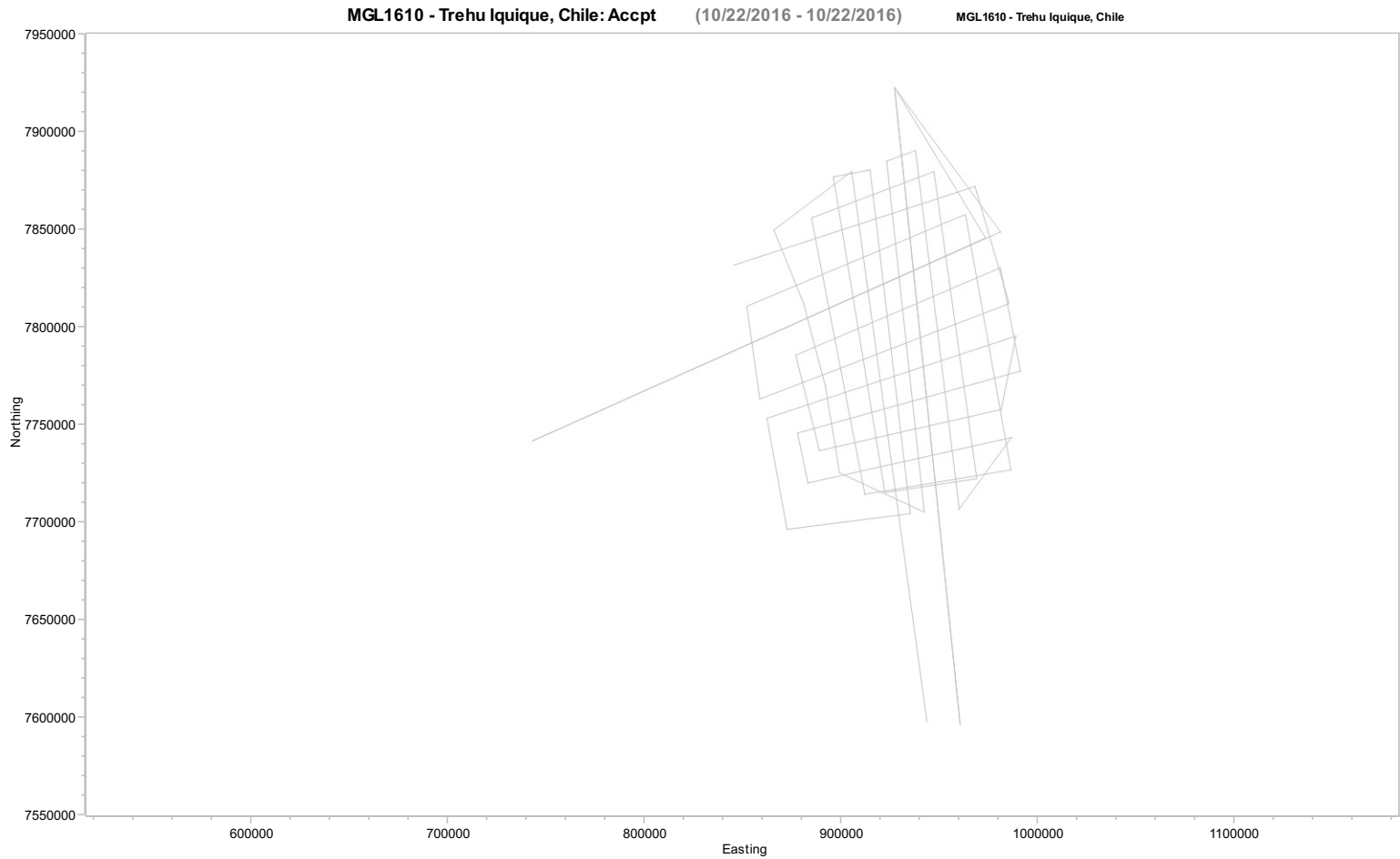
MGL1610 - Trehu Iquique, Chile (MGL1610) (no data for period)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave MPS	Seq Status	Line Status
Total						0.00			



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Client: United States National Science Foundation
Job No: MGL1601
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1601
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sun 23 Oct

The Vessel started the day Alongside Berth #3 Arica, Chile Mobilizing for MGL1610 and at 19:31 UTC the vessel got underway for the Mission area (SIO Rosette Test Site). It remained in transit throughout the rest of the day.



Daily Comment Summaries - Plan for Tomorrow

Sun 23 Oct

The Vessel will start the day underway for the Mission area (SIO Rosette Test Site). At 00:45 UTC the Vessel is expect be on site to complete the First SIO Rosette test of the OBS Acoustic releases down to 2000m. This operation is expected to be completed ~03:00 UTC. At that time the vessel start heading towards the first OBS deployment site. It will remain in a OBS Deployment/Recovery mode throughout the end of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

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Category	Code	Start	End	Duration
 Mob Ashore	MB_MA	Sun 23. Oct 00:00	Sun 23. Oct 19:21	19.350
Mobilising Alongside Berth #3 Arica Chile				
 Transit to Prospect	MB_TT	Sun 23. Oct 19:21	Sun 23. Oct 24:00	4.650
Transiting from Arica, Chile to first SIO Rosset test				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

23-Oct	Hours	% Percent
Mobilisation	24.000	100.000
Mob Ashore	19.350	80.625
Transit to Prospect	4.650	19.375
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Mobilisation	48.000	100.000
Mob Ashore	43.350	90.312
Transit to Prospect	4.650	9.688
Total	48.000	



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Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 23 Oct

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 23 Oct

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Todd Jensvold LDEO OMO Science Officer - Acq
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Production Day By Day (Accpt km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
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Production Totals (Accpt km) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Infill	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

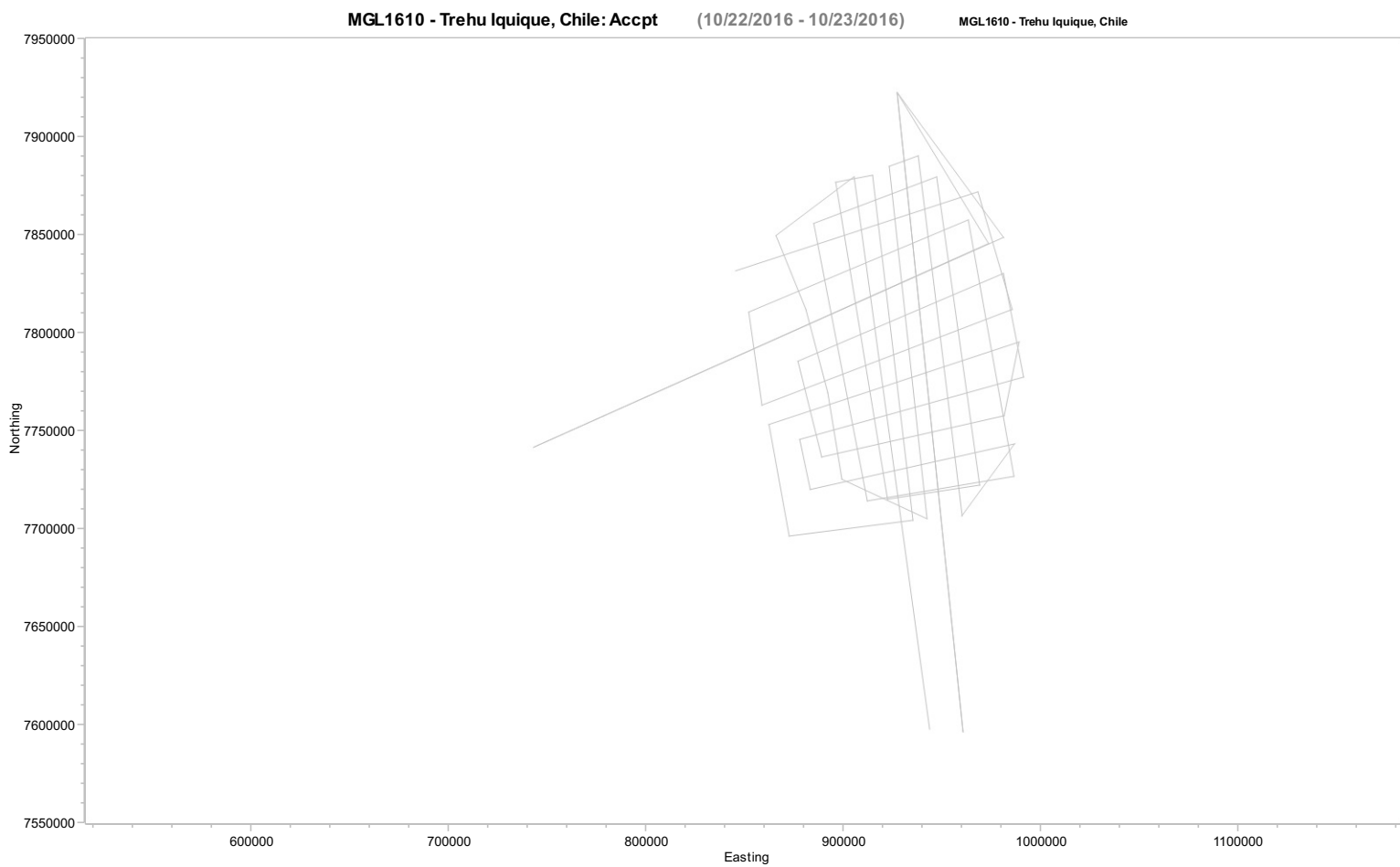
MGL1610 - Trehu Iquique, Chile (MGL1610) (no data for period)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave MPS	Seq Status	Line Status
Total						0.00			



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Consultancy:
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Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1601
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Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Mon 24 Oct

The Vessel will start the day underway to the Mission area to conduct the SIO Rosette Test Site.. At 00:45 UTC the Vessel arrived on site to complete the SIO Rosette test of the OBS Acoustic releases down to 2000m. This operation was completed at 02:57 UTC and the vessel made its way to the first OBS Deployment location. At 04:03 UTC the vessel began OBS deployment/recovery operations. At 17:00 the vessel suspended OBS/Deployment operations to conduct the second SIO/German Rosette test of the OBS Acoustic Release down to 4000m. This Test was completed at 20:56 and the vessel resumed OBS Deployment/Recovery Operations throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Mon 24 Oct

The Vessel will start the day conducting OBS Deployment/Recovery operations and this will continue throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)









Category	Code	Start	End	Duration
Transit to Prospect	MB_TT	Mon 24. Oct 00:00	Mon 24. Oct 00:53	0.883
In transit to prospect, for mobilising deployment.				
Testing	MB_TE	Mon 24. Oct 00:53	Mon 24. Oct 02:57	2.067
Testing of SIO Acoustic Release Rosette down to 2000m				
Transit	SB_TRT	Mon 24. Oct 02:57	Mon 24. Oct 03:54	0.950
Transit to OBSS20 Deployment Site				
Deployment	MB_DP	Mon 24. Oct 03:54	Mon 24. Oct 04:27	0.550
Deployment of OBSS20				
Transit	SB_TRT	Mon 24. Oct 04:27	Mon 24. Oct 05:02	0.583
Transit to OBS Deployment Site OBSS19				
Deployment	MB_DP	Mon 24. Oct 05:02	Mon 24. Oct 05:23	0.350
Deployment of OBSS19				
Transit	SB_TRT	Mon 24. Oct 05:23	Mon 24. Oct 06:10	0.783
Transit to OBS Deployment Site OBSS18				
Deployment	MB_DP	Mon 24. Oct 06:10	Mon 24. Oct 06:36	0.433
Deployment of OBSS18				
Transit	SB_TRT	Mon 24. Oct 06:36	Mon 24. Oct 07:30	0.900
Transit to OBS Deployment Site OBSS37				
Deployment	MB_DP	Mon 24. Oct 07:30	Mon 24. Oct 07:51	0.350
Deployment of OBSS37				
Transit	SB_TRT	Mon 24. Oct 07:51	Mon 24. Oct 08:39	0.800
Transit to OBS Deployment site OBSS41				
Deployment	MB_DP	Mon 24. Oct 08:39	Mon 24. Oct 09:02	0.383
Deployment of OBSS41				
Transit	SB_TRT	Mon 24. Oct 09:02	Mon 24. Oct 09:54	0.867
Transit to OBS Deployment Site OBSS34				
Deployment	MB_DP	Mon 24. Oct 09:54	Mon 24. Oct 10:15	0.350
Deployment of OBSS34				
Transit	SB_TRT	Mon 24. Oct 10:15	Mon 24. Oct 10:57	0.700
Transit to OBS Deployment Site OBSS33				
Deployment	MB_DP	Mon 24. Oct 10:57	Mon 24. Oct 11:19	0.367
Deployment of OBS Site OBSS33				
Transit	SB_TRT	Mon 24. Oct 11:19	Mon 24. Oct 12:13	0.900
Transit to OBS Deployment Site OBSS40A				
Deployment	MB_DP	Mon 24. Oct 12:13	Mon 24. Oct 12:31	0.300
Deployment of OBSS40A				
Transit	SB_TRT	Mon 24. Oct 12:31	Mon 24. Oct 13:26	0.917
Transit to OBS Deployment Site OBSS17				
Deployment	MB_DP	Mon 24. Oct 13:26	Mon 24. Oct 13:42	0.267
Deployment of OBSS17				
Transit	SB_TRT	Mon 24. Oct 13:42	Mon 24. Oct 14:29	0.783
Transit to OBS Deployment Site OBSS36				
Deployment	MB_DP	Mon 24. Oct 14:29	Mon 24. Oct 14:50	0.350
Deployment of OBSS36				



Daily Science Report

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Category	Code	Start	End	Duration
 Recovery	DM_RC	Mon 24. Oct 14:50	Mon 24. Oct 15:32	0.700
Recovery of OBS08-N1				
 Transit	SB_TRT	Mon 24. Oct 15:32	Mon 24. Oct 17:00	1.467
Transit to SIO/German Rosette Test Site in 4000m of water.				
 Testing	MB_TE	Mon 24. Oct 17:00	Mon 24. Oct 20:56	3.933
SIO/German Rosette Test in 4000m of water				
 Transit	SB_TRT	Mon 24. Oct 20:56	Mon 24. Oct 22:14	1.300
Transit to OBS Deployment Site OBSS35				
 Deployment	MB_DP	Mon 24. Oct 22:14	Mon 24. Oct 22:28	0.233
Deployment of OBSS35				
 Transit	SB_TRT	Mon 24. Oct 22:28	Mon 24. Oct 24:00	1.533
Transiting to OBS Recovery Site OBS07-N2				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

24-Oct	Hours	% Percent
Chargeable Standby	12.483	52.014
Transit	12.483	52.014
Demobilisation	0.700	2.917
Recovery	0.700	2.917
Mobilisation	10.817	45.069
Deployment	3.933	16.389
Testing	6.000	25.000
Transit to Prospect	0.883	3.681
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Mobilisation	58.817	81.690
Deployment	3.933	5.463
Mob Ashore	43.350	60.208
Testing	6.000	8.333
Transit to Prospect	5.533	7.685
Demobilisation	0.700	0.972
Recovery	0.700	0.972
Chargeable Standby	12.483	17.338
Transit	12.483	17.338
Total	72.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 24 Oct

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report



10/24/2016

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Daily Comment Summaries - Personnel Onboard

Mon 24 Oct

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Production Day By Day (Accpt km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
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Production Totals (Accpt km) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Infill	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

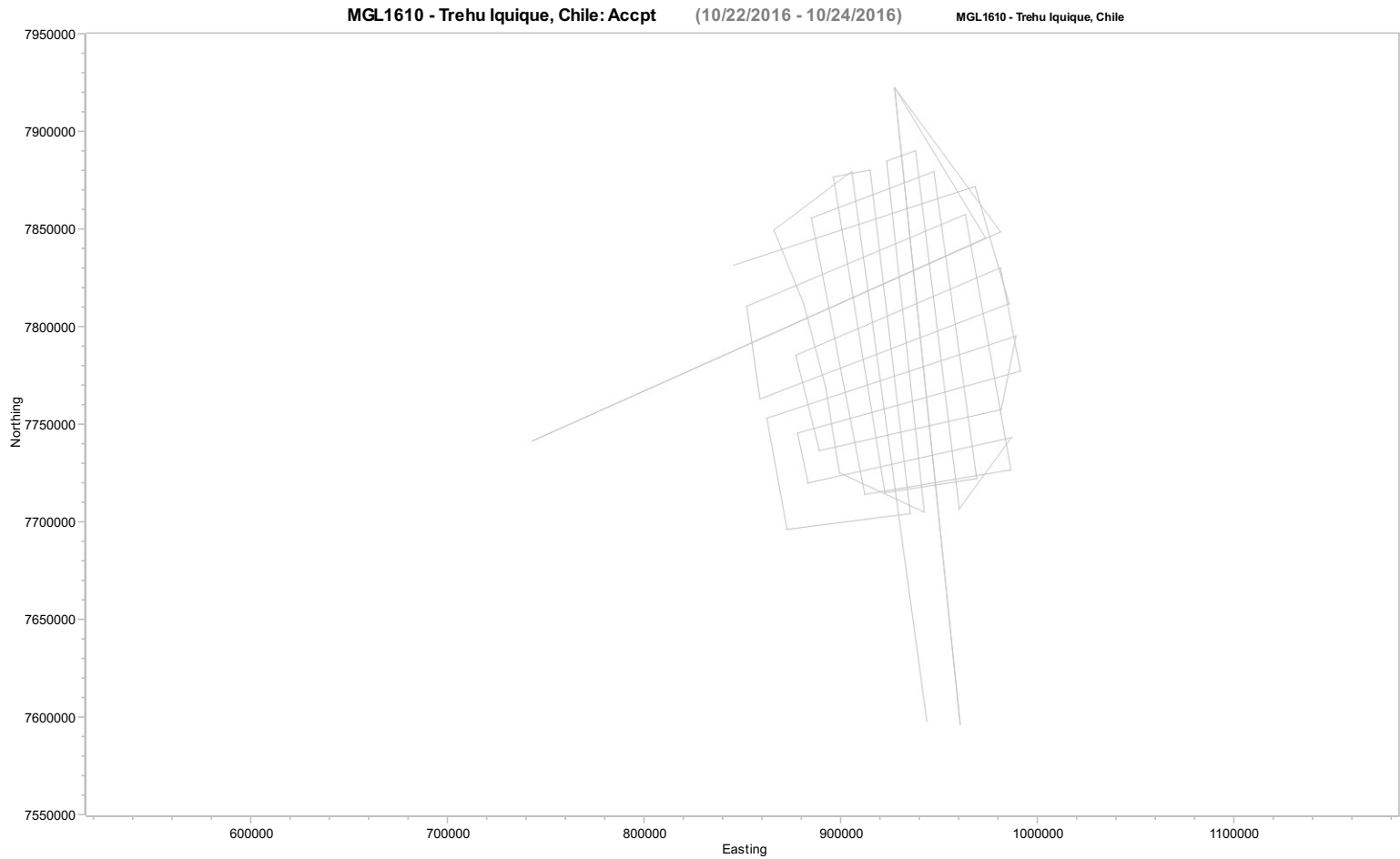
MGL1610 - Trehu Iquique, Chile (MGL1610) (no data for period)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave MPS	Seq Status	Line Status
Total						0.00			



10/24/2016

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Daily Science Report

10/25/2016

Page 1

Client: United States National Science Foundation
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Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1601
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Tue 25 Oct

The Vessel will started the day conducting OBS Deployment/Retrievals and this continued through out the day.

Daily Comment Summaries - Plan for Tomorrow

Tue 25 Oct

The Vessel will start the day conducting OBS Deployment/Recovery operations and this will continue throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Recovery	DM_RC	Tue 25. Oct 00:00	Tue 25. Oct 01:20	1.333
Recovery of OB07-N2				
Transit	SB_TRT	Tue 25. Oct 01:20	Tue 25. Oct 02:11	0.850
Transit to OBS Deployment Site S29.				
Deployment	MB_DP	Tue 25. Oct 02:11	Tue 25. Oct 02:31	0.333
Deployment of OBS S29				
Transit	SB_TRT	Tue 25. Oct 02:31	Tue 25. Oct 03:23	0.867
Transit to OBS Recovery Site OBS06-N5				
Recovery	DM_RC	Tue 25. Oct 03:23	Tue 25. Oct 05:00	1.617
Recovery of OBS06-N5				
Transit	SB_TRT	Tue 25. Oct 05:00	Tue 25. Oct 07:58	2.967
Transit to OBSS26 Deployment Site				
Deployment	MB_DP	Tue 25. Oct 07:58	Tue 25. Oct 08:23	0.417
Deployment of OBSS26				
Transit	SB_TRT	Tue 25. Oct 08:23	Tue 25. Oct 08:56	0.550
Transit to OBSS25 Deployment Site				
Deployment	MB_DP	Tue 25. Oct 08:56	Tue 25. Oct 09:23	0.450
Deployment of OBSS25				
Transit	SB_TRT	Tue 25. Oct 09:23	Tue 25. Oct 10:06	0.717
Transit to OBSS24 Deployment Site				
Deployment	MB_DP	Tue 25. Oct 10:06	Tue 25. Oct 10:25	0.317
Deployment of OBSS24				
Transit	SB_TRT	Tue 25. Oct 10:25	Tue 25. Oct 11:04	0.650
Transit to OBSS23 Deployment Site.				
Deployment	MB_DP	Tue 25. Oct 11:04	Tue 25. Oct 11:21	0.283
Deployment of OBSS23				
Transit	SB_TRT	Tue 25. Oct 11:21	Tue 25. Oct 12:02	0.683
Transit to OBSS22 Deployment Site.				
Deployment	MB_DP	Tue 25. Oct 12:02	Tue 25. Oct 12:33	0.517
Deployment of OBSS22				
Transit	SB_TRT	Tue 25. Oct 12:33	Tue 25. Oct 13:25	0.867
Transit to OBSS21 Deployment Site				
Deployment	MB_DP	Tue 25. Oct 13:25	Tue 25. Oct 13:45	0.333
Deployment of OBSS21				
Deployment	MB_DP	Tue 25. Oct 13:45	Tue 25. Oct 14:24	0.650
Deployment of ARGOS Float #1 at OBSS21 Site.				
Transit	SB_TRT	Tue 25. Oct 14:24	Tue 25. Oct 18:55	4.517
Transit to OBSS27A Deployment Site.				
Deployment	MB_DP	Tue 25. Oct 18:55	Tue 25. Oct 19:09	0.233
Deployment of OSSS27A				
Transit	SB_TRT	Tue 25. Oct 19:09	Tue 25. Oct 19:52	0.717
Transit to OBSS27B Deployment Site				
Deployment	MB_DP	Tue 25. Oct 19:52	Tue 25. Oct 20:02	0.167
Deployment of OBSS27B				
Transit	SB_TRT	Tue 25. Oct 20:02	Tue 25. Oct 20:40	0.633



Daily Science Report

10/25/2016

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Category	Code	Start	End	Duration
Transit to OBSS28 Deployment Site				
Deployment	MB_DP	Tue 25. Oct 20:40	Tue 25. Oct 20:58	0.300
Deployment of OBSS28				
Transit	SB_TRT	Tue 25. Oct 20:58	Tue 25. Oct 21:59	1.017
Transit to OBSS65 Deployment Site				
Deployment	MB_DP	Tue 25. Oct 21:59	Tue 25. Oct 22:12	0.217
Deployment of OBS65				
Transit	SB_TRT	Tue 25. Oct 22:12	Tue 25. Oct 24:00	1.800
Transit to OBSS66 Deployment Site.				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

25-Oct	Hours	% Percent
Chargeable Standby	16.833	70.139
Transit	16.833	70.139
Demobilisation	2.950	12.292
Recovery	2.950	12.292
Mobilisation	4.217	17.569
Deployment	4.217	17.569
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Mobilisation	63.033	65.660
Deployment	8.150	8.490
Mob Ashore	43.350	45.156
Testing	6.000	6.250
Transit to Prospect	5.533	5.764
Demobilisation	3.650	3.802
Recovery	3.650	3.802
Chargeable Standby	29.317	30.538
Transit	29.317	30.538
Total	96.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 25 Oct

Navigation:

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Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

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No Major Issues to Report

General Purpose Science:

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Miscellaneous:

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Josh Manger SIO/OBSIP Technician/engineer
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Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
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Sara Husni - Alhisi GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

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Date	Vessel	First - Last Sequence	Production
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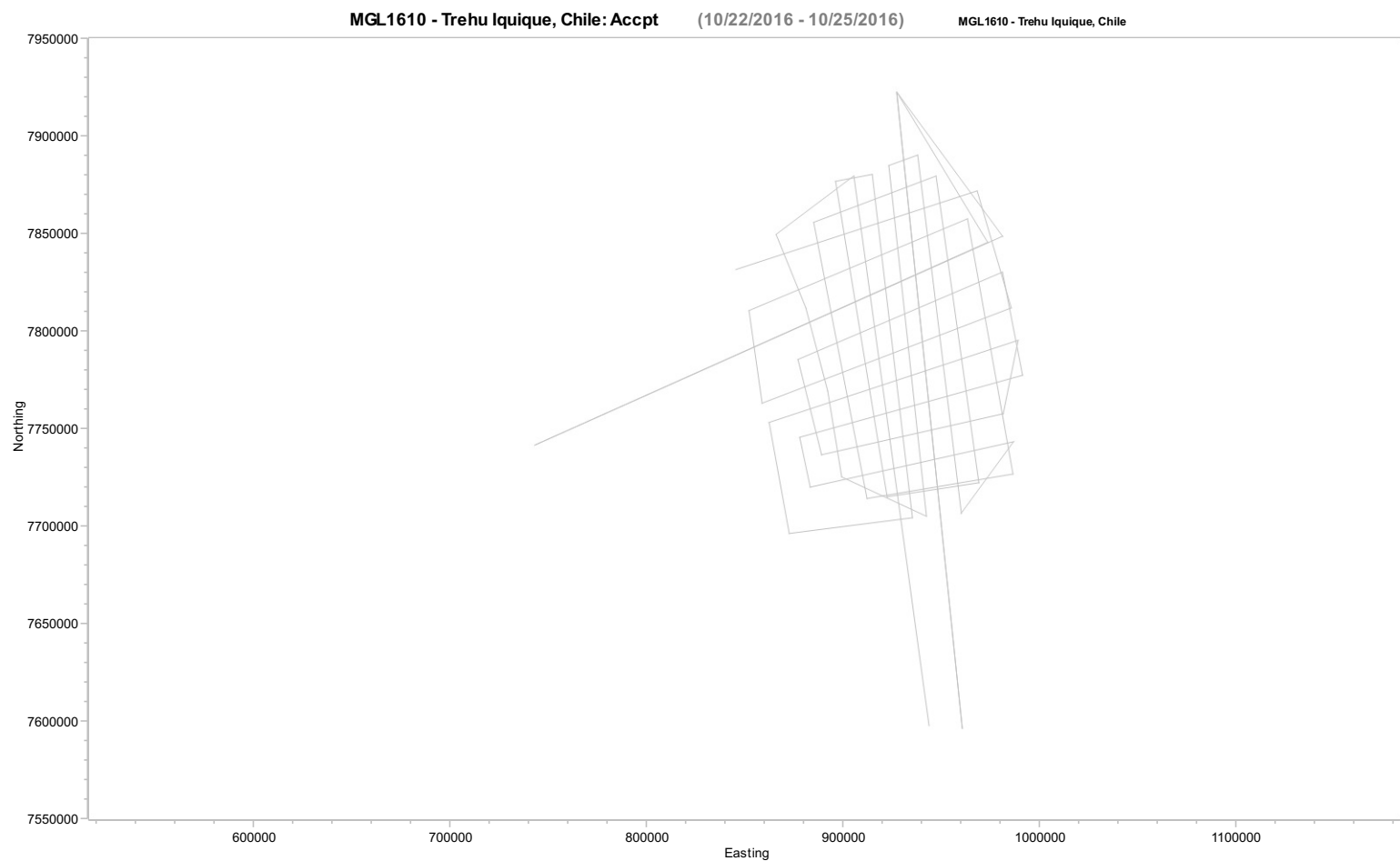
Production Totals (Accpt km) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Infill	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

MGL1610 - Trehu Iquique, Chile (MGL1610) (no data for period)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave MPS	Seq Status	Line Status
Total						0.00			





Daily Science Report

10/26/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1601
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1601
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Wed 26 Oct

The Vessel started the day conducting OBS Deployment/Retrievals and this continued through out the day. During the day re-building of the Sound Source Sub-Array's continue. The RTCM issue to Seapath was resolved and repair of Seal was Completed.

Daily Comment Summaries - Plan for Tomorrow

Wed 26 Oct

The Vessel will start the day conducting OBS Deployment/Recovery operations and this will continue throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Transit	SB_TRT	Wed 26. Oct 00:00	Wed 26. Oct 00:11	0.183
Continued transit to OBSS66 Deployment Site.				
Deployment	MB_DP	Wed 26. Oct 00:11	Wed 26. Oct 00:29	0.300
Deployment of OBSSD66				
Transit	SB_TRT	Wed 26. Oct 00:29	Wed 26. Oct 02:21	1.867
Transit to SS51 Deployment Site				
Deployment	MB_DP	Wed 26. Oct 02:21	Wed 26. Oct 02:37	0.267
Deployment of OBS SS51				
Transit	SB_TRT	Wed 26. Oct 02:37	Wed 26. Oct 03:17	0.667
Transit to Deployment of SG56 Geomar				
Deployment	MB_DP	Wed 26. Oct 03:17	Wed 26. Oct 03:30	0.217
Deployment of SG56				
Transit	SB_TRT	Wed 26. Oct 03:30	Wed 26. Oct 03:36	0.100
Transit to Retrieve OBS12-C3/ release command sent				
Recovery	DM_RC	Wed 26. Oct 03:36	Wed 26. Oct 04:33	0.950
Retrieve OBS12-C3				
Transit	SB_TRT	Wed 26. Oct 04:33	Wed 26. Oct 05:32	0.983
Transit to Deployment of SG46 Geomar				
Deployment	MB_DP	Wed 26. Oct 05:32	Wed 26. Oct 05:45	0.217
Deployment of SG46				
Transit	SB_TRT	Wed 26. Oct 05:45	Wed 26. Oct 06:02	0.283
Transit to Retrieve OBS05-C2/ release command sent				
Recovery	DM_RC	Wed 26. Oct 06:02	Wed 26. Oct 07:23	1.350
Retrieve OBS05-C2				
Transit	SB_TRT	Wed 26. Oct 07:23	Wed 26. Oct 07:57	0.567
Transit to Deployment of SG47 Geomar				
Deployment	MB_DP	Wed 26. Oct 07:57	Wed 26. Oct 08:14	0.283
Deployment of SG47 Geomar				
Transit	SB_TRT	Wed 26. Oct 08:14	Wed 26. Oct 09:04	0.833
Transit to Deployment of OBS SS52				
Deployment	MB_DP	Wed 26. Oct 09:04	Wed 26. Oct 09:21	0.283
Deployment of OBS SS52				
Transit	SB_TRT	Wed 26. Oct 09:21	Wed 26. Oct 10:00	0.650
Transit to Deployment of OBS SS48				
Deployment	MB_DP	Wed 26. Oct 10:00	Wed 26. Oct 10:11	0.183
Deployment of OBS SS48				
Transit	SB_TRT	Wed 26. Oct 10:11	Wed 26. Oct 10:18	0.117
Transit to Retrieve OBS11-C1/ release command sent				
Recovery	DM_RC	Wed 26. Oct 10:18	Wed 26. Oct 11:10	0.867
Retrieve OBS11-C1				
Transit	SB_TRT	Wed 26. Oct 11:10	Wed 26. Oct 11:56	0.767
Transit to Deployment of OBS SG13				
Deployment	MB_DP	Wed 26. Oct 11:56	Wed 26. Oct 12:11	0.250
Deployment of OBS SG13				
Transit	SB_TRT	Wed 26. Oct 12:11	Wed 26. Oct 12:47	0.600



Daily Science Report

10/26/2016

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Category	Code	Start	End	Duration
Transit to Retrieve OBS10-N4/ release command sent				
 Recovery	DM_RC	Wed 26. Oct 12:47	Wed 26. Oct 13:21	0.567
Retrieve OBS10-N4				
 Transit	SB_TRT	Wed 26. Oct 13:21	Wed 26. Oct 14:31	1.167
Transit to Deployment of OBS SS43				
 Deployment	MB_DP	Wed 26. Oct 14:31	Wed 26. Oct 14:53	0.367
Deployment of OBS SS43				
 Transit	SB_TRT	Wed 26. Oct 14:53	Wed 26. Oct 15:38	0.750
Transit to Deployment of OBS SS42				
 Deployment	MB_DP	Wed 26. Oct 15:38	Wed 26. Oct 15:53	0.250
Deployment of OBS SS42				
 Transit	SB_TRT	Wed 26. Oct 15:53	Wed 26. Oct 16:43	0.833
Transit to Deployment of OBS SS30				
 Deployment	MB_DP	Wed 26. Oct 16:43	Wed 26. Oct 16:54	0.183
Deployment of OBS SS30				
 Transit	SB_TRT	Wed 26. Oct 16:54	Wed 26. Oct 17:43	0.817
Transit to Deployment of OBS SS38				
 Deployment	MB_DP	Wed 26. Oct 17:43	Wed 26. Oct 17:55	0.200
Deployment of OBS SS38				
 Transit	SB_TRT	Wed 26. Oct 17:55	Wed 26. Oct 18:47	0.867
Transit to Deployment of OBS SS39				
 Deployment	MB_DP	Wed 26. Oct 18:47	Wed 26. Oct 18:58	0.183
Deployment of OBS SS39				
 Transit	SB_TRT	Wed 26. Oct 18:58	Wed 26. Oct 19:50	0.867
Transit to Deployment of OBS SS16				
 Deployment	MB_DP	Wed 26. Oct 19:50	Wed 26. Oct 20:03	0.217
Deployment of OBS SS16				
 Transit	SB_TRT	Wed 26. Oct 20:03	Wed 26. Oct 21:01	0.967
Transit to Deployment of OBS SS32				
 Deployment	MB_DP	Wed 26. Oct 21:01	Wed 26. Oct 21:15	0.233
Deployment of OBS SS32				
 Transit	SB_TRT	Wed 26. Oct 21:15	Wed 26. Oct 22:01	0.767
Transit to Deployment of OBS SG15				
 Deployment	MB_DP	Wed 26. Oct 22:01	Wed 26. Oct 22:13	0.200
Deployment of OBS SG15				
 Transit	SB_TRT	Wed 26. Oct 22:13	Wed 26. Oct 22:17	0.067
Transit to Retrieve OBS09-N3/ release command sent				
 Recovery	DM_RC	Wed 26. Oct 22:17	Wed 26. Oct 23:09	0.867
Retrieve OBS09-N3				
 Transit	SB_TRT	Wed 26. Oct 23:09	Wed 26. Oct 23:51	0.700
Transit to Deployment of OBS SG31				
 Deployment	MB_DP	Wed 26. Oct 23:51	Wed 26. Oct 24:00	0.150
Deployment of OBS SG31'				



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Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

26-Oct	Hours	% Percent
Chargeable Standby	15.417	64.236
Transit	15.417	64.236
Demobilisation	4.600	19.167
Recovery	4.600	19.167
Mobilisation	3.983	16.597
Deployment	3.983	16.597
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Mobilisation	67.017	55.847
Deployment	12.133	10.111
Mob Ashore	43.350	36.125
Testing	6.000	5.000
Transit to Prospect	5.533	4.611
Demobilisation	8.250	6.875
Recovery	8.250	6.875
Chargeable Standby	44.733	37.278
Transit	44.733	37.278
Total	120.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 26 Oct

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 26 Oct

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



Production Day By Day (Accpt km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
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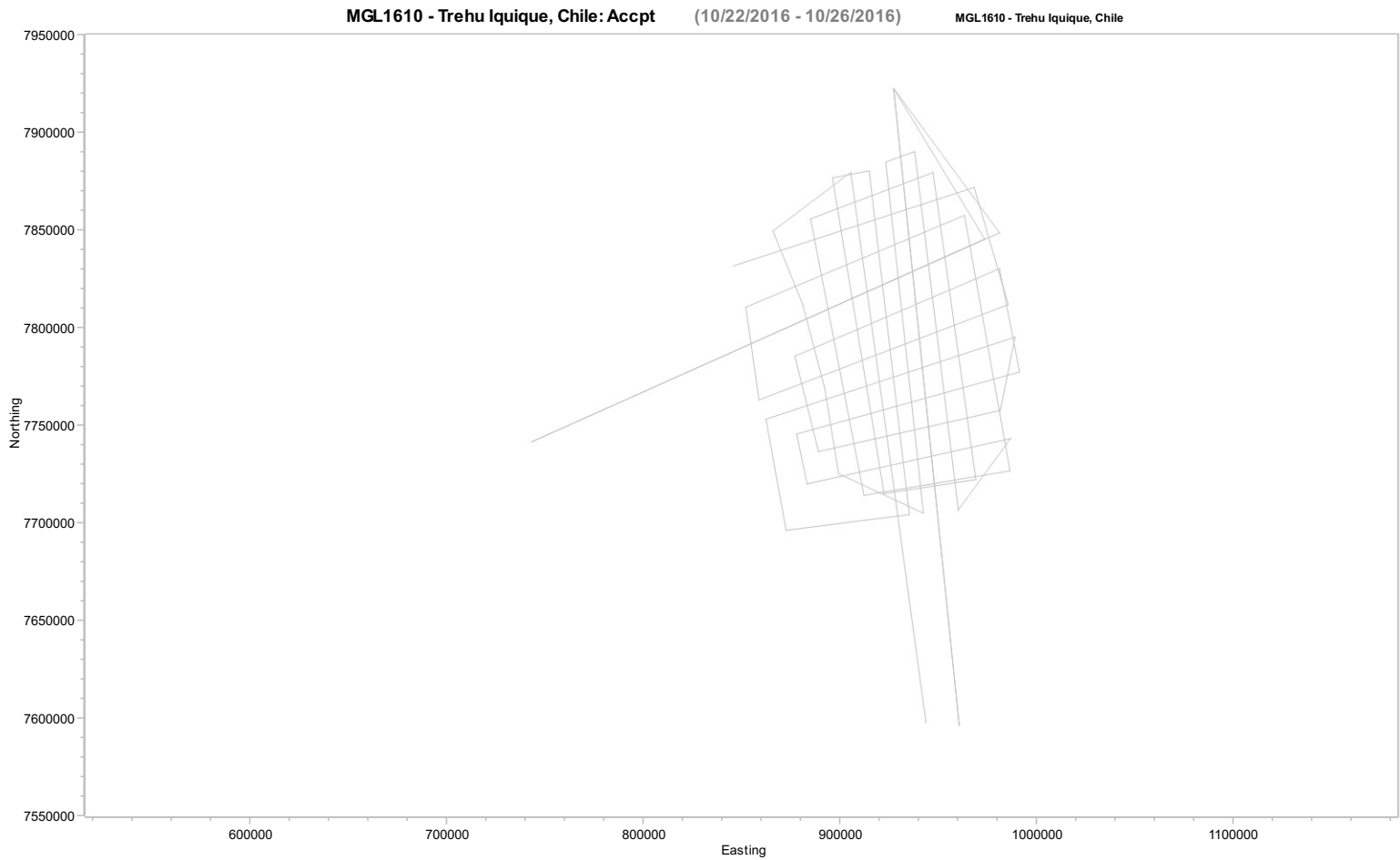
Production Totals (Accpt km) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Infill	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

MGL1610 - Trehu Iquique, Chile (MGL1610) (no data for period)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave MPS	Seq Status	Line Status
Total						0.00			





Daily Science Report

10/27/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1601
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1601
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Thu 27 Oct

The Vessel started the day conducting OBS Deployment/Retrievals and this continued through out the day. Continued to re-assembly and Testing of the Sound Source. Testing of POSNET GPS Pods (Source, TB, and Workboat)

Daily Comment Summaries - Plan for Tomorrow

Thu 27 Oct

The Vessel will start the day conducting OBS Deployment/Recovery operations, will continue until ~08:00 UTC. At which time the vessel will try to recover data from Geodetic Transponder Sites on the Sea Floor this operation will continue off and on for the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Deployment	MB_DP	Thu 27. Oct 00:00	Thu 27. Oct 00:03	0.050
Deployment of OBS SG31'				
Transit	SB_TRT	Thu 27. Oct 00:03	Thu 27. Oct 00:59	0.933
Transit to Deployment of OBS SG14				
Deployment	MB_DP	Thu 27. Oct 00:59	Thu 27. Oct 01:13	0.233
Deployment of OBS SG14				
Transit	SB_TRT	Thu 27. Oct 01:13	Thu 27. Oct 02:10	0.950
Transit to Deployment of OBS SG44				
Deployment	MB_DP	Thu 27. Oct 02:10	Thu 27. Oct 02:23	0.217
Deployment of OBS SG44				
Transit	SB_TRT	Thu 27. Oct 02:23	Thu 27. Oct 03:04	0.683
Transit to Deployment of OBS SG45				
Deployment	MB_DP	Thu 27. Oct 03:04	Thu 27. Oct 03:22	0.300
Deployment of OBS SG45				
Transit	SB_TRT	Thu 27. Oct 03:22	Thu 27. Oct 04:15	0.883
Transit to Deployment of OBS SS50				
Deployment	MB_DP	Thu 27. Oct 04:15	Thu 27. Oct 04:33	0.300
Deployment of OBS SS50				
Transit	SB_TRT	Thu 27. Oct 04:33	Thu 27. Oct 05:24	0.850
Transit to Deployment of OBS SS49				
Deployment	MB_DP	Thu 27. Oct 05:24	Thu 27. Oct 05:37	0.217
Deployment of OBS SS49				
Transit	SB_TRT	Thu 27. Oct 05:37	Thu 27. Oct 06:32	0.917
Transit to Deployment of OBS SS 54				
Deployment	MB_DP	Thu 27. Oct 06:32	Thu 27. Oct 06:46	0.233
Deployment of OBS SS54				
Transit	SB_TRT	Thu 27. Oct 06:46	Thu 27. Oct 07:33	0.783
Transit to Deployment of OBS SS53				
Deployment	MB_DP	Thu 27. Oct 07:33	Thu 27. Oct 07:49	0.267
Deployment of OBS SS53				
Transit	SB_TRT	Thu 27. Oct 07:49	Thu 27. Oct 08:45	0.933
Transit to OBSS12 Deployment Site				
Deployment	MB_DP	Thu 27. Oct 08:45	Thu 27. Oct 09:00	0.250
Deployment of OBSS12				
Transit	SB_TRT	Thu 27. Oct 09:00	Thu 27. Oct 09:41	0.683
Transit to OBSS11 Deployment Site				
Deployment	MB_DP	Thu 27. Oct 09:41	Thu 27. Oct 09:55	0.233
Deployment of OBSS11				
Transit	SB_TRT	Thu 27. Oct 09:55	Thu 27. Oct 10:42	0.783
Transit to OBSS57 Deployment Site				
Deployment	MB_DP	Thu 27. Oct 10:42	Thu 27. Oct 10:59	0.283
Deployment of OBSS57.				
Transit	SB_TRT	Thu 27. Oct 10:59	Thu 27. Oct 11:48	0.817
Transit to OBSS58 Deployment Site				
Deployment	MB_DP	Thu 27. Oct 11:48	Thu 27. Oct 12:06	0.300



Daily Science Report

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Category	Code	Start	End	Duration
Deployment of OBSS58				
 Transit	SB_TRT	Thu 27. Oct 12:06	Thu 27. Oct 13:30	1.400
Transit to OBSS60 Deployment Site				
 Deployment	MB_DP	Thu 27. Oct 13:30	Thu 27. Oct 13:44	0.233
Deployment of OBSS60				
 Transit	SB_TRT	Thu 27. Oct 13:44	Thu 27. Oct 14:48	1.067
Transit to Deployment Site OBSS10				
 Deployment	MB_DP	Thu 27. Oct 14:48	Thu 27. Oct 15:06	0.300
Deployment of OBSS10				
 Recovery	DM_RC	Thu 27. Oct 15:06	Thu 27. Oct 15:47	0.683
Recovery of OBS13-C4				
 Transit	SB_TRT	Thu 27. Oct 15:47	Thu 27. Oct 16:41	0.900
Transit to OBSS59 Deployment Site				
 Deployment	MB_DP	Thu 27. Oct 16:41	Thu 27. Oct 16:53	0.200
Deployment of OBSS59				
 Transit	SB_TRT	Thu 27. Oct 16:53	Thu 27. Oct 17:35	0.700
Transit to OBSS55 Deployment Site				
 Deployment	MB_DP	Thu 27. Oct 17:35	Thu 27. Oct 18:00	0.417
Deployment of OBSS55				
 Recovery	DM_RC	Thu 27. Oct 18:00	Thu 27. Oct 19:22	1.367
Recovery of OBS04-C5				
 Transit	SB_TRT	Thu 27. Oct 19:22	Thu 27. Oct 20:10	0.800
Transit to OBSS67 Deployment Site				
 Deployment	MB_DP	Thu 27. Oct 20:10	Thu 27. Oct 20:23	0.217
Deployment of OBSS67				
 Transit	SB_TRT	Thu 27. Oct 20:23	Thu 27. Oct 21:03	0.667
Transit to OBSS62 Deployment Site				
 Deployment	MB_DP	Thu 27. Oct 21:03	Thu 27. Oct 21:30	0.450
Deployment of OBSS62				
 Recovery	DM_RC	Thu 27. Oct 21:30	Thu 27. Oct 22:37	1.117
Recovery of OBS03-81				
 Transit	SB_TRT	Thu 27. Oct 22:37	Thu 27. Oct 23:31	0.900
Transit to OBSS09 Deployment Site				
 Deployment	MB_DP	Thu 27. Oct 23:31	Thu 27. Oct 23:44	0.217
Deployment of OBSS09				
 Transit	SB_TRT	Thu 27. Oct 23:44	Thu 27. Oct 24:00	0.267
Transit to OBSS63 Deployment Site				



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Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

27-Oct	Hours	% Percent
Chargeable Standby	15.917	66.319
Transit	15.917	66.319
Demobilisation	3.167	13.194
Recovery	3.167	13.194
Mobilisation	4.917	20.486
Deployment	4.917	20.486
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Mobilisation	71.933	49.954
Deployment	17.050	11.840
Mob Ashore	43.350	30.104
Testing	6.000	4.167
Transit to Prospect	5.533	3.843
Demobilisation	11.417	7.928
Recovery	11.417	7.928
Chargeable Standby	60.650	42.118
Transit	60.650	42.118
Total	144.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 27 Oct

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Thu 27 Oct

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



10/27/2016

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Production Day By Day (Accpt km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
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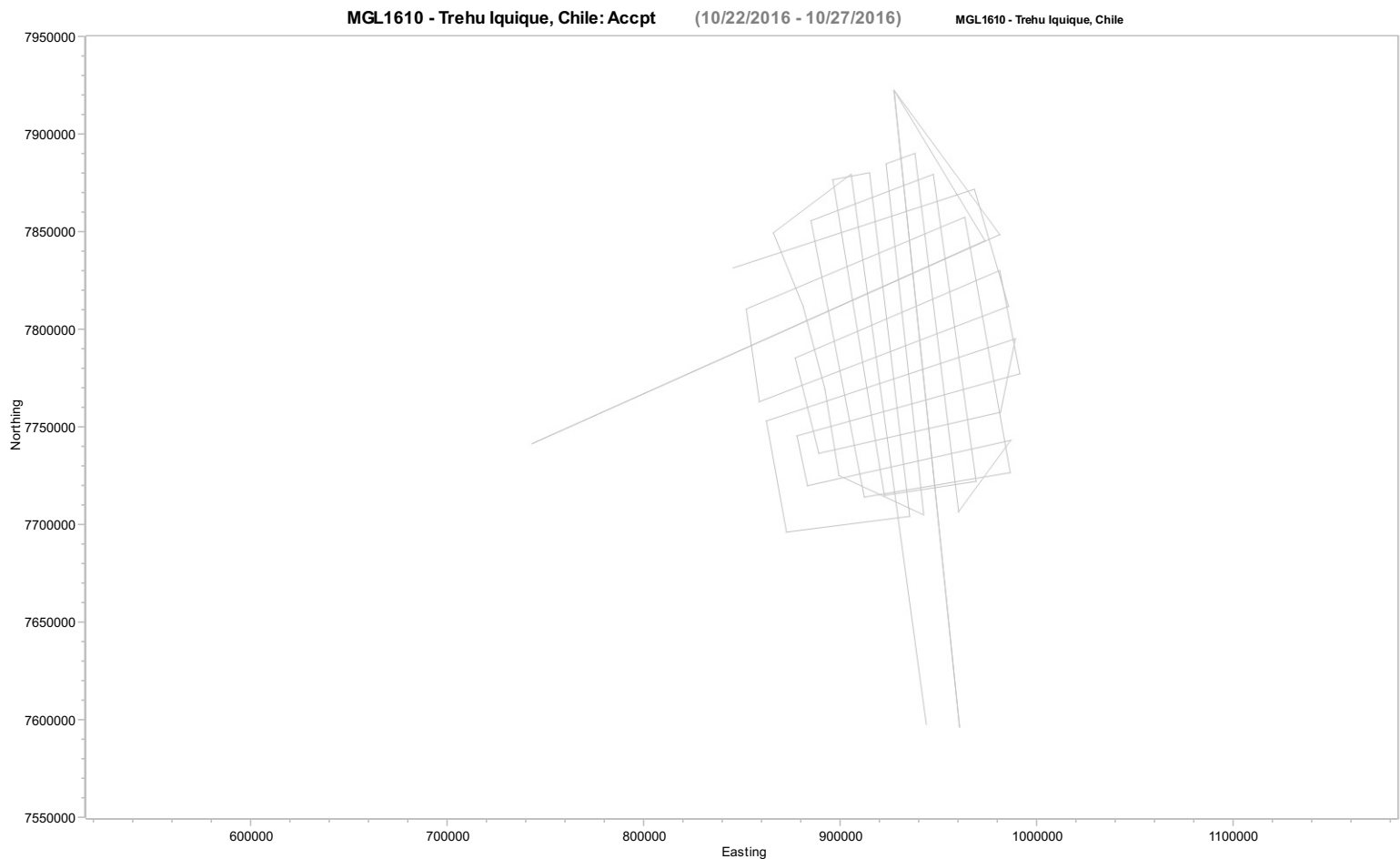
Production Totals (Accpt km) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Infill	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

MGL1610 - Trehu Iquique, Chile (MGL1610) (no data for period)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave MPS	Seq Status	Line Status
Total						0.00			





Daily Science Report

10/28/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1601
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1601
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Fri 28 Oct

The Vessel started the day conducting OBS Deployment/Recovery operations, which continue until ~08:00 UTC. At which time the vessel will try to recover data from Geodetic Transponder Sites on the Sea Floor this operations. At 10:44 UTC geodetic data recovery operations was aborted at Area 3, due to noise in the water column. The Vessel resumed OBS Deployment/Recovery operation until 13:37 UTC. At this time the vessel began geodetic data recovery operations was aborted at Area 2. The vessel was on site with the props clutched out until 20:22 when the data collection was completed at this site. The Vessel then resumed OBS Deployment/Recovery operation until 22:06 UTC. At which time the vessel started transiting back to geodetic data recovery Area 3. The vessel remained in transit throughout the remainder of the day.

Daily Comment Summaries - Plan for Tomorrow

Fri 28 Oct

The Vessel will start the day transiting to geodetic data recovery Area 3. We expect to start retrieving data at 00:42 UTC. It is expected to take 8 to 10 hours at this site to get all the data. Once complete the vessel will resume OBS Deployment/Recovery operations throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Transit	SB_TRT	Fri 28. Oct 00:00	Fri 28. Oct 00:38	0.633
Transit to OBSS63 Deployment Site				
Deployment	MB_DP	Fri 28. Oct 00:38	Fri 28. Oct 00:51	0.217
Deployment of OBSS63				
Transit	SB_TRT	Fri 28. Oct 00:51	Fri 28. Oct 01:44	0.883
Transit to OBSS64 Deployment Site				
Deployment	MB_DP	Fri 28. Oct 01:44	Fri 28. Oct 01:56	0.200
Deployment of OBSS64				
Transit	SB_TRT	Fri 28. Oct 01:56	Fri 28. Oct 02:40	0.733
Transit to OBSS08 Deployment Site				
Deployment	MB_DP	Fri 28. Oct 02:40	Fri 28. Oct 02:52	0.200
Deployment of OBSS08				
Transit	SB_TRT	Fri 28. Oct 02:52	Fri 28. Oct 03:43	0.850
Transit to OBSS61A Deployment Site				
Deployment	MB_DP	Fri 28. Oct 03:43	Fri 28. Oct 03:55	0.200
Deployment of OBSS61A				
Transit	SB_TRT	Fri 28. Oct 03:55	Fri 28. Oct 04:36	0.683
Transit to OBSS68 Deployment Site				
Deployment	MB_DP	Fri 28. Oct 04:36	Fri 28. Oct 05:03	0.450
Deployment of OBSS68				
Transit	SB_TRT	Fri 28. Oct 05:03	Fri 28. Oct 05:46	0.717
Transit to OBS01-S3 Recovery site				
Recovery	DM_RC	Fri 28. Oct 05:46	Fri 28. Oct 07:05	1.317
Recovery of OBS01-S3				
Transit	SB_TRT	Fri 28. Oct 07:05	Fri 28. Oct 08:00	0.917
Transit to Geodetic AREA 3				
Field Operations	SB_FO	Fri 28. Oct 08:00	Fri 28. Oct 10:46	2.767
At Area 3 Geodetic Site with the Dunk Transducer over the site downloading the data from the Sea Floor Acoustic Transponders.				
Transit	SB_TRT	Fri 28. Oct 10:46	Fri 28. Oct 12:15	1.483
Transit to OBS 02-S2 Recovery Site				
Recovery	DM_RC	Fri 28. Oct 12:15	Fri 28. Oct 13:00	0.750
Recovery of OBS02-S2				
Transit	SB_TRT	Fri 28. Oct 13:00	Fri 28. Oct 14:00	1.000
Transit to Area 2 Geodetic				
Field Operations	SB_FO	Fri 28. Oct 14:00	Fri 28. Oct 20:26	6.433
At Area 2 Geodetic Site with the Dunk Transducer over the site downloading the data from the Sea Floor Acoustic Transponders				
Transit	SB_TRT	Fri 28. Oct 20:26	Fri 28. Oct 21:04	0.633
Transit to OBSS07 Deployment Site				
Deployment	MB_DP	Fri 28. Oct 21:04	Fri 28. Oct 21:14	0.167
Deployment of OBSS07				
Transit	SB_TRT	Fri 28. Oct 21:14	Fri 28. Oct 21:54	0.667
Transit to OBSS06 Deployment Site				



Daily Science Report

10/28/2016

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Category	Code	Start	End	Duration
 Deployment	MB_DP	Fri 28. Oct 21:54	Fri 28. Oct 22:06	0.200
Deployment of OBSS06				
 Transit	SB_TRT	Fri 28. Oct 22:06	Fri 28. Oct 24:00	1.900
Transit Back to Geodetic AREA 3				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

28-Oct	Hours	% Percent
Chargeable Standby	20.300	84.583
Field Operations	9.200	38.333
Transit	11.100	46.250
Demobilisation	2.067	8.611
Recovery	2.067	8.611
Mobilisation	1.633	6.806
Deployment	1.633	6.806
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Mobilisation	73.567	43.790
Deployment	18.683	11.121
Mob Ashore	43.350	25.804
Testing	6.000	3.571
Transit to Prospect	5.533	3.294
Chargeable Standby	80.950	48.185
Field Operations	9.200	5.476
Transit	71.750	42.708
Demobilisation	13.483	8.026
Recovery	13.483	8.026
Total	168.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 28 Oct

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report



10/28/2016

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Daily Comment Summaries - Personnel Onboard

Fri 28 Oct

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



10/28/2016

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Production Day By Day (Accpt km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
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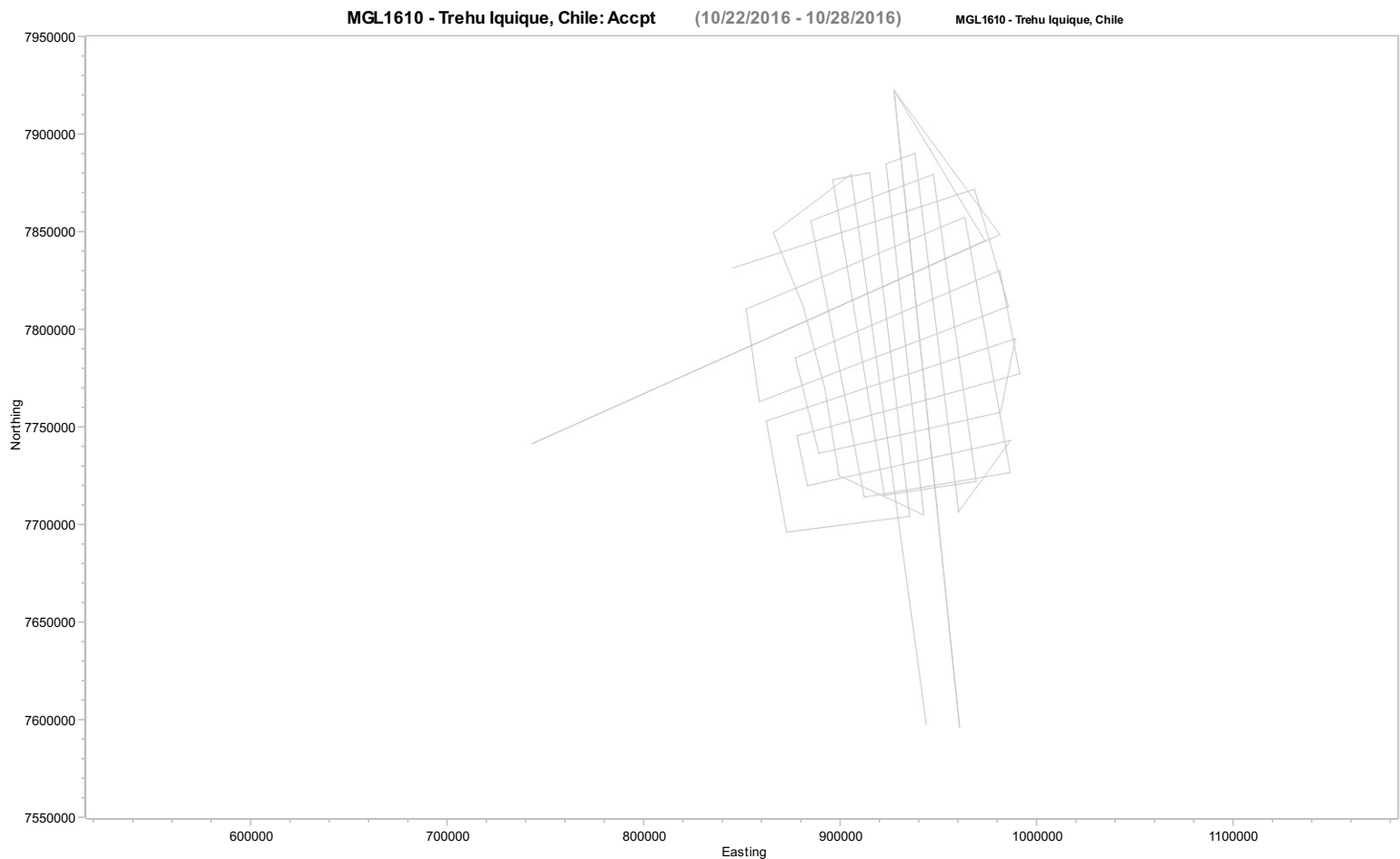
Production Totals (Accpt km) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Infill	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

MGL1610 - Trehu Iquique, Chile (MGL1610) (no data for period)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave MPS	Seq Status	Line Status
Total						0.00			





Daily Science Report

10/29/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1601
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1601
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sat 29 Oct

The Vessel will start the day transiting to geodetic data recovery Area 3. At 00:42 UTC started retrieving on Geodetic Site Area 3. This continued until ~06:07 UTC at which time the vessel resumed OBS Deployment and recovery operations. At 15:26 UTC OBS Deployment and Recovery Operations were completed and the vessel starting making it way toward LINE: MGL1610OBS01 which started at 19:17 UTC and continued throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Sat 29 Oct

The Vessel will start the day in production on line: MGL1610OBS01 and will continued on it throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Transit	SB_TRT	Sat 29. Oct 00:00	Sat 29. Oct 00:34	0.567
Transit Back to Geodetic AREA 3				
Field Operations	SB_FO	Sat 29. Oct 00:34	Sat 29. Oct 03:46	3.200
At Area 3 Geodetic Site with the Dunk Transducer over the site downloading the data from the Sea Floor Acoustic Transponders				
Transit	SB_TRT	Sat 29. Oct 03:46	Sat 29. Oct 04:30	0.733
Reposition on Geodetic AREA 3				
Field Operations	SB_FO	Sat 29. Oct 04:30	Sat 29. Oct 06:14	1.733
Continue At Area 3 Geodetic Site with the Dunk Transducer over the site downloading the data from the Sea Floor Acoustic Transponders				
Transit	SB_TRT	Sat 29. Oct 06:14	Sat 29. Oct 08:55	2.683
Transit to OBSS05 Deployment Site				
Deployment	MB_DP	Sat 29. Oct 08:55	Sat 29. Oct 09:07	0.200
Deployment of OBSS05				
Transit	SB_TRT	Sat 29. Oct 09:07	Sat 29. Oct 09:54	0.783
Transit to OBSS04 Deployment Site				
Deployment	MB_DP	Sat 29. Oct 09:54	Sat 29. Oct 10:08	0.233
Deployment of OBSS04				
Transit	SB_TRT	Sat 29. Oct 10:08	Sat 29. Oct 10:44	0.600
Transit to OBSS03 Deployment site				
Deployment	MB_DP	Sat 29. Oct 10:44	Sat 29. Oct 11:06	0.367
Deployment of OBSS03				
Transit	SB_TRT	Sat 29. Oct 11:06	Sat 29. Oct 11:45	0.650
Transit to OBSS02				
Deployment	MB_DP	Sat 29. Oct 11:45	Sat 29. Oct 12:01	0.267
Deployment of OBSS02				
Transit	SB_TRT	Sat 29. Oct 12:01	Sat 29. Oct 13:04	1.050
Transit to OBS15-X2 Recovery Site				
Recovery	DM_RC	Sat 29. Oct 13:04	Sat 29. Oct 14:00	0.933
Recovery of OBS15-X2				
Transit	SB_TRT	Sat 29. Oct 14:00	Sat 29. Oct 15:11	1.183
Transit to OBSS01 Deployment Site				
Deployment	MB_DP	Sat 29. Oct 15:11	Sat 29. Oct 15:26	0.250
Deployment of OBS15-X2				
Transit	SB_TRT	Sat 29. Oct 15:26	Sat 29. Oct 16:14	0.800
Transit to Source Deployment Location				
Deployment	MB_DP	Sat 29. Oct 16:14	Sat 29. Oct 16:30	0.267
Deployment of PAM and Maggie				
Deployment	MB_DP	Sat 29. Oct 16:30	Sat 29. Oct 17:55	1.417
Deployment of Source				
Cetacean	SB_CT	Sat 29. Oct 17:55	Sat 29. Oct 18:26	0.517
Ramp Up of Source				
Transit	SB_TRT	Sat 29. Oct 18:26	Sat 29. Oct 19:17	0.850
Transit to Start of Line: MGL1601OB03				
Production Prime	AC_PP	Sat 29. Oct 19:17	Sat 29. Oct 24:00	4.717
SOL Seq 1 MGL1610OBS03 FGSP=964 FCSP=964 Hdg=354.1° Prime MSP Seq 1 MGL1610OBS03 LGSP=1098 LCSP= 1098 Midnight				



Daily Science Report

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Category	Code	Start	End	Duration
SOL Water Depth=1264m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

29-Oct	Hours	% Percent
Acquisition	4.717	19.653
Production Prime	4.717	19.653
Chargeable Standby	15.350	63.958
Cetacean	0.517	2.153
Field Operations	4.933	20.556
Transit	9.900	41.250
Demobilisation	0.933	3.889
Recovery	0.933	3.889
Mobilisation	3.000	12.500
Deployment	3.000	12.500
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	96.300	50.156
Cetacean	0.517	0.269
Field Operations	14.133	7.361
Transit	81.650	42.526
Mobilisation	76.567	39.878
Deployment	21.683	11.293
Mob Ashore	43.350	22.578
Testing	6.000	3.125
Transit to Prospect	5.533	2.882
Acquisition	4.717	2.457
Production Prime	4.717	2.457
Demobilisation	14.417	7.509
Recovery	14.417	7.509
Total	192.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 29 Oct

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Following Source Elements need repaired - S1G8, S3G2, and S4G10. These Element are not sending back timing information to the vessel.

General Purpose Science:

Maggie is showing some erratic readings at times

Miscellaneous:

No Major Issues to Report



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Daily Comment Summaries - Personnel Onboard

Sat 29 Oct

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Hernandez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

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Karla Rios RPS PSO
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Josh Manger SIO/OBSIP Technician/engineer
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Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



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Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sat 29 Oct	Marcus G Langseth	1	40.20
Total Production:			40.20

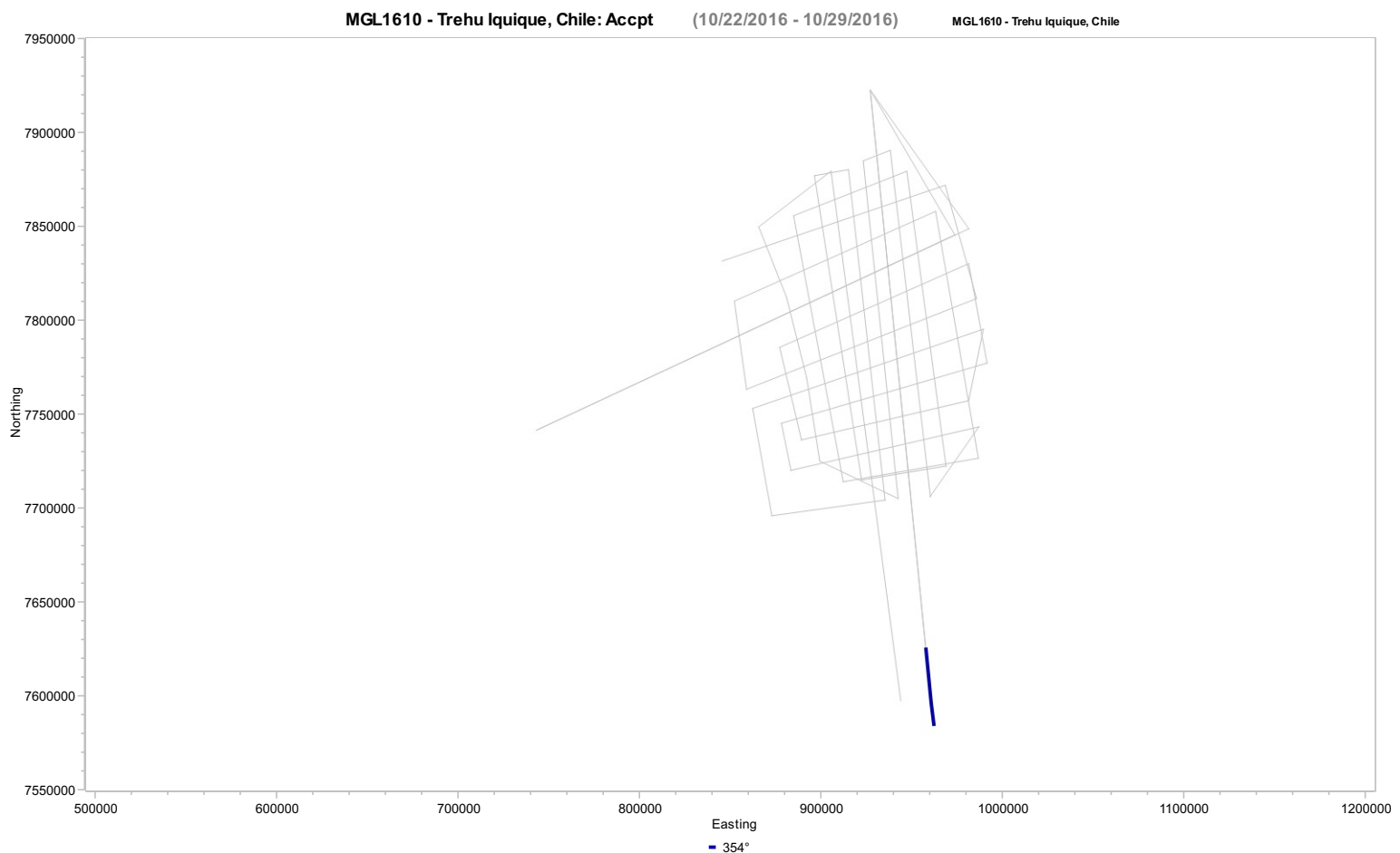
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	40.20	40.20	40.20	40.20
Infill	0.00	0.00	0.00	0.00
Combined	40.20	40.20	40.20	40.20
Total				
Prime	40.20	40.20	40.20	40.20
Infill	0.00	0.00	0.00	0.00
Combined	40.20	40.20	40.20	40.20

Production Listing (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

MGL1610 - Trehu Iquique, Chile (MGL1610)

Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	OBS03	354.1	14547	12939	Prime	40.20	4.602	Part	Midnight
Total						40.20			





Daily Science Report

10/30/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sun 30 Oct

The Vessel started the day in production on line: MGL1610OBS03 and it continued that way throughout the day. There was two power downs for PSO Sightings. The Soft tow rope for String #2 parted and need to be replaced. In addition the Maggie tow fish was changed out because of erratic readings.

Daily Comment Summaries - Plan for Tomorrow

Sun 30 Oct

The Vessel will start the day continuing production on line: MGL1610OBS03. At ~08:26 UTC the vessel will conclude production on line OBS03 and make a normal line change to line OBS02. It is expected to start line OBS02 at ~09:45 UTC. It will remain in production on Line OBS02 until ~20:30 UTC at which time it will make another normal line change. It is expected to begin production on line OBS01 at ~22:00 UTC and remain this way throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 30. Oct 00:00	Sun 30. Oct 11:41	11.683
SOL Seq 1 MGL1610OBS03 FGSP=1099 Hdg=354.1° Prime EOL Seq 1 MGL1610OBS03 LGSP=1459 Incomplete				
Cetacean	DT_CT	Sun 30. Oct 11:41	Sun 30. Oct 12:12	0.517
Power Down for PSO Sighting - SP's 1460 - 1472				
Production Prime	AC_PP	Sun 30. Oct 12:12	Sun 30. Oct 21:42	9.500
SOL Seq 1 MGL1610OBS03 FGSP=1473 Hdg=354.1° Prime EOL Seq 1 MGL1610OBS03 LGSP=1765 Incomplete				
Cetacean	DT_CT	Sun 30. Oct 21:42	Sun 30. Oct 22:14	0.533
Power Down for PSO Sighting - Sp's 1766-1779				
Production Prime	AC_PP	Sun 30. Oct 22:14	Sun 30. Oct 24:00	1.767
SOL Seq 1 MGL1610OBS03 FGSP=1780 Hdg=354.1° Prime MSP Seq 1 MGL1610OBS03 LGSP=1833 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

30-Oct	Hours	% Percent
Acquisition	22.950	95.625
Production Prime	22.950	95.625
DownTime	1.050	4.375
Cetacean	1.050	4.375
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
DownTime	1.050	0.486
Cetacean	1.050	0.486
Chargeable Standby	96.300	44.583
Cetacean	0.517	0.239
Field Operations	14.133	6.543
Transit	81.650	37.801
Mobilisation	76.567	35.448
Deployment	21.683	10.039
Mob Ashore	43.350	20.069
Testing	6.000	2.778
Transit to Prospect	5.533	2.562
Acquisition	27.667	12.809
Production Prime	27.667	12.809
Demobilisation	14.417	6.674
Recovery	14.417	6.674
Total	216.000	



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Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 30 Oct

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Following Source Elements need repaired - S1G8, S3G2, and S4G10. These Element are not sending backtiming information to the vessel.

General Purpose Science:

Maggie was showing erratic readings, after trouble shooting of shipboard electronic and cabling, The Tow fish was changed and the readings stabilized.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 30 Oct

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

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Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
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Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sun 30 Oct	Marcus G Langseth	1	216.38
Total Production:			216.38

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	216.38	256.57	256.57	256.57
Infill	0.00	0.00	0.00	0.00
Combined	216.38	256.57	256.57	256.57
Total				
Prime	216.38	256.57	256.57	256.57
Infill	0.00	0.00	0.00	0.00
Combined	216.38	256.57	256.57	256.57

Production Listing (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

MGL1610 - Trehu Iquique, Chile (MGL1610)

Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	OBS03	354.1	12938	3938	Prime	216.38	2.581	Part	Midnight
NTBP: 8437 - 8271 (not chgd), NTBP: 4765 - 4587 (not chgd)									
Total						216.38			



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Daily Science Report

10/31/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus / David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Mon 31 Oct

The Vessel started the continuing production on line: MGL1610OBS03. At ~08:26 UTC the vessel concluded production on line OBS03 and make a normal line change to line OBS02. Line OBS02 started at ~09:45 UTC. This line concluded at ~20:30 UTC at which time the vessel began another normal line change. At 21:50 the vessel begin production on line OBS01 and remain this way throughout the rest of the day.

There were a number of power downs for PSO Sightings of Marine Mammals throughout the day.

Daily Comment Summaries - Plan for Tomorrow

Mon 31 Oct

The Vessel will start the day continuing production on line: MGL1610OBS01 and will remain that way throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
<div></div> Production Prime	AC_PP	Mon 31. Oct 00:00	Mon 31. Oct 08:26	8.433
SOL Seq 1 MGL1610OBS03 FGSP=1834 Hdg=354.1° Prime EOL Seq 1 MGL1610OBS03 LGSP=2091 EOL Water Depth=1416m				
<div></div> Prime Line Change	AC_PLC	Mon 31. Oct 08:26	Mon 31. Oct 09:42	1.267
Nominal Prime line change.				
<div></div> Production Prime	AC_PP	Mon 31. Oct 09:42	Mon 31. Oct 15:42	6.000
SOL Seq 2 MGL1610OBS02 FGSP=2976 Hdg=143.6° Prime EOL Seq 2 MGL1610OBS02 LGSP=3158 Incomplete				
<div></div> Cetacean	DT_CT	Mon 31. Oct 15:42	Mon 31. Oct 15:47	0.083
NTBP Seq 2 OBS02 FSP=3158 LSP=3160				
<div></div> Production Prime	AC_PP	Mon 31. Oct 15:47	Mon 31. Oct 18:57	3.167
SOL Seq 2 MGL1610OBS02 FGSP=3161 Hdg=143.6° Prime EOL Seq 2 MGL1610OBS02 LGSP=3257 Incomplete				
<div></div> Cetacean	DT_CT	Mon 31. Oct 18:57	Mon 31. Oct 19:29	0.533
NTBP Seq 2 OBS02 FSP=3258 LSP=3275				
<div></div> Production Prime	AC_PP	Mon 31. Oct 19:29	Mon 31. Oct 20:16	0.783
SOL Seq 2 MGL1610OBS02 FGSP=3276 Hdg=143.6° Prime EOL Seq 2 MGL1610OBS02 LGSP=3299 Complete EOL Water Depth=877m				
<div></div> Cetacean	DT_CT	Mon 31. Oct 20:16	Mon 31. Oct 20:27	0.183
NTBP Seq 2 OBS02 FSP=3300 LSP=3005				
<div></div> Prime Line Change	AC_PLC	Mon 31. Oct 20:27	Mon 31. Oct 21:50	1.383
Nominal Prime line change.				
<div></div> Production Prime	AC_PP	Mon 31. Oct 21:50	Mon 31. Oct 22:13	0.383
SOL Seq 3 MGL1610OBS01 FGSP=3988 Hdg=245.8° Prime EOL Seq 3 MGL1610OBS01 LGSP=3999 Incomplete SOL Water Depth=516m				
<div></div> Cetacean	DT_CT	Mon 31. Oct 22:13	Mon 31. Oct 23:23	1.167
NTBP Seq 3 OBS01 FSP=4000 LSP=4034				
<div></div> Production Prime	AC_PP	Mon 31. Oct 23:23	Mon 31. Oct 24:00	0.617
SOL Seq 3 MGL1610OBS01 FGSP=4035 Hdg=245.8° Prime MSP Seq 3 MGL1610OBS01 LGSP=4054 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

31-Oct	Hours	% Percent
<div></div> Acquisition	22.033	91.806
Prime Line Change	2.650	11.042
Production Prime	19.383	80.764
<div></div> DownTime	1.967	8.194
Cetacean	1.967	8.194
Day's Total	24.000	100.000



10/31/2016

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Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
DownTime	3.017	1.257
Cetacean	3.017	1.257
Chargeable Standby	96.300	40.125
Cetacean	0.517	0.215
Field Operations	14.133	5.889
Transit	81.650	34.021
Mobilisation	76.567	31.903
Deployment	21.683	9.035
Mob Ashore	43.350	18.062
Testing	6.000	2.500
Transit to Prospect	5.533	2.306
Acquisition	49.700	20.708
Prime Line Change	2.650	1.104
Production Prime	47.050	19.604
Demobilisation	14.417	6.007
Recovery	14.417	6.007
Total	240.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 31 Oct

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Following Source Elements need repaired - S1G8, S3G2, and S4G10. These Element are not sending back timing information to the vessel.

General Purpose Science:

pCO2 had its flow control value bypassed and it flow lines cleaned out of water/condensation. All flow rates are set manually via the regulators on the tops of the tanks or at the pump.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Mon 31 Oct

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
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Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



10/31/2016

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Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Mon 31 Oct	Marcus G Langseth	1 - 3	176.78
Total Production:			176.78

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	176.78	176.78	433.35	433.35
Infill	0.00	0.00	0.00	0.00
Combined	176.78	176.78	433.35	433.35
Total				
Prime	176.78	176.78	433.35	433.35
Infill	0.00	0.00	0.00	0.00
Combined	176.78	176.78	433.35	433.35

Production Listing (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

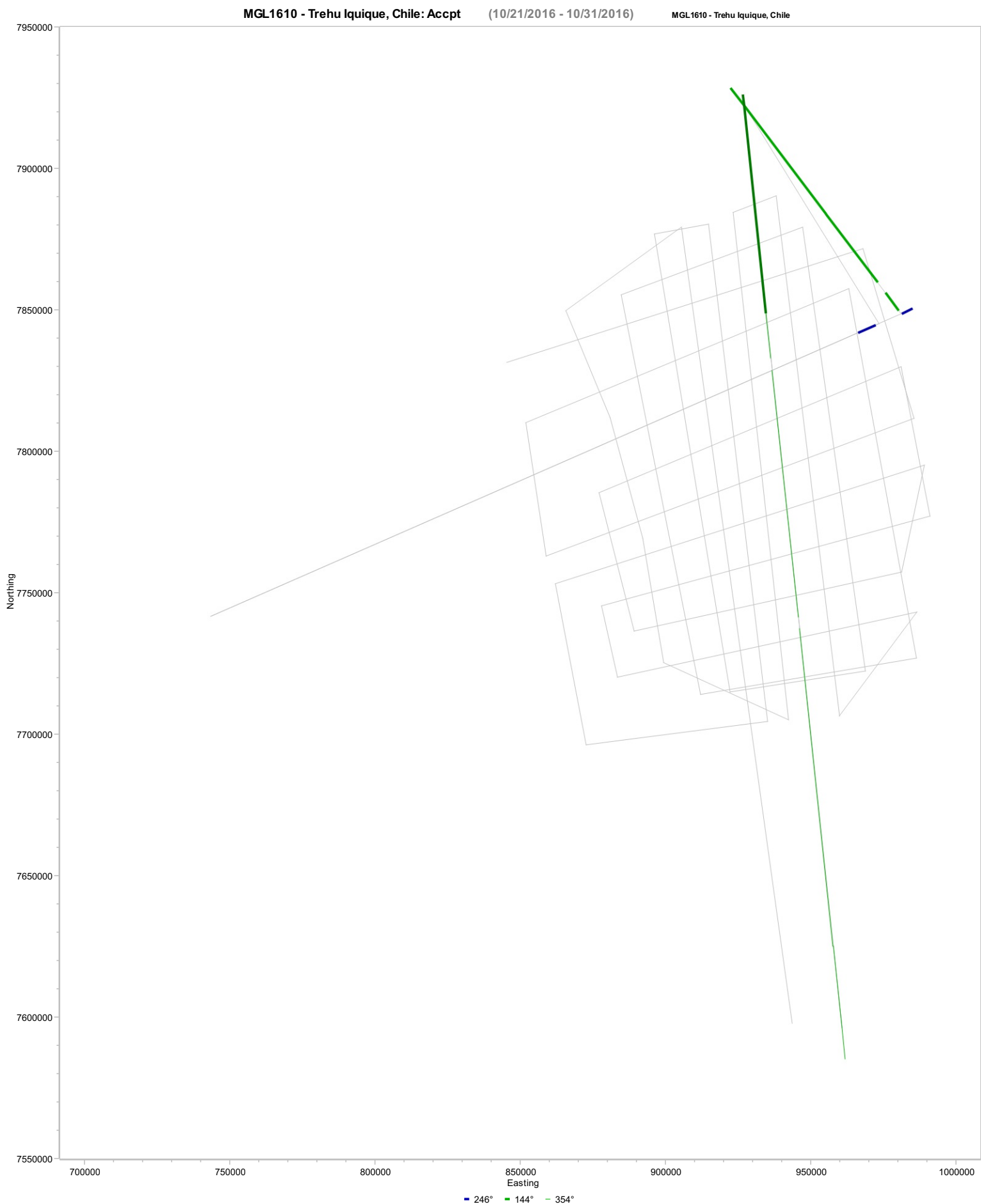
MGL1610 - Trehu Iquique, Chile (MGL1610)

Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	OBS03	354.1	3937	854	Prime	77.10	4.935	Complete	Complete
2	OBS02	143.6	4955	1079	Prime	90.65	2.322	Complete	Complete
NTBP: 2770 - 2736 (not chgd), NTBP: 1570 - 1356 (not chgd), NTBP: 1078 - 1007 (not chgd)									
3	OBS01	245.8	11590	10798	Prime	9.03	3.034	Part	Midnight
NTBP: 11457 - 11027 (not chgd)									
Total						176.78			



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Daily Science Report

11/1/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Tue 01 Nov

The Vessel started the continuing production on line: MGL1610OBS01 and continued this way throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Tue 01 Nov

The Vessel will start the day continuing production on line: MGL1610OBS01 . At ~02:34 UTC the vessel will end the line OBS01 and start to recover the source. Once the source is on-board the vessel will make its way back to OBS Station #21 to recovery this OBS. Once the Data from OBSS21 has been downloaded the OBS will be re-Deployed. Shortly after the OBS has been redeployed the vessel will deploy Geomar's Wave Glider. Once this has been accomplished the vessel will move a short distance and start to deployment of the 12.6km streamer. It is hoped that the deployment of the streamer can be completed before night fall and the vessel can get in production on line MGL1610MCS01 before the end of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 1. Nov 00:00	Tue 1. Nov 24:00	24.000
SOL Seq 3 MGL1610OBS01 FGSP= 4055 Hdg=245.8° Prime MSP Seq 3 MGL1610OBS01 LGSP=1967 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

1-Nov	Hours	% Percent
Acquisition	24.000	100.000
Production Prime	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
DownTime	3.017	1.143
Cetacean	3.017	1.143
Chargeable Standby	96.300	36.477
Cetacean	0.517	0.196
Field Operations	14.133	5.354
Transit	81.650	30.928
Mobilisation	76.567	29.003
Deployment	21.683	8.213
Mob Ashore	43.350	16.420
Testing	6.000	2.273
Transit to Prospect	5.533	2.096
Acquisition	73.700	27.917
Prime Line Change	2.650	1.004
Production Prime	71.050	26.913
Demobilisation	14.417	5.461
Recovery	14.417	5.461
Total	264.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 01 Nov

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Miscellaneous:
No Major Issues to Report



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Daily Comment Summaries - Personnel Onboard

Tue 01 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Tue 1 Nov	Marcus G Langseth	3	220.80
Total Production:			220.80

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	220.80	397.58	220.80	654.15
Infill	0.00	0.00	0.00	0.00
Combined	220.80	397.58	220.80	654.15
Total				
Prime	220.80	397.58	220.80	654.15
Infill	0.00	0.00	0.00	0.00
Combined	220.80	397.58	220.80	654.15

Production Listing (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

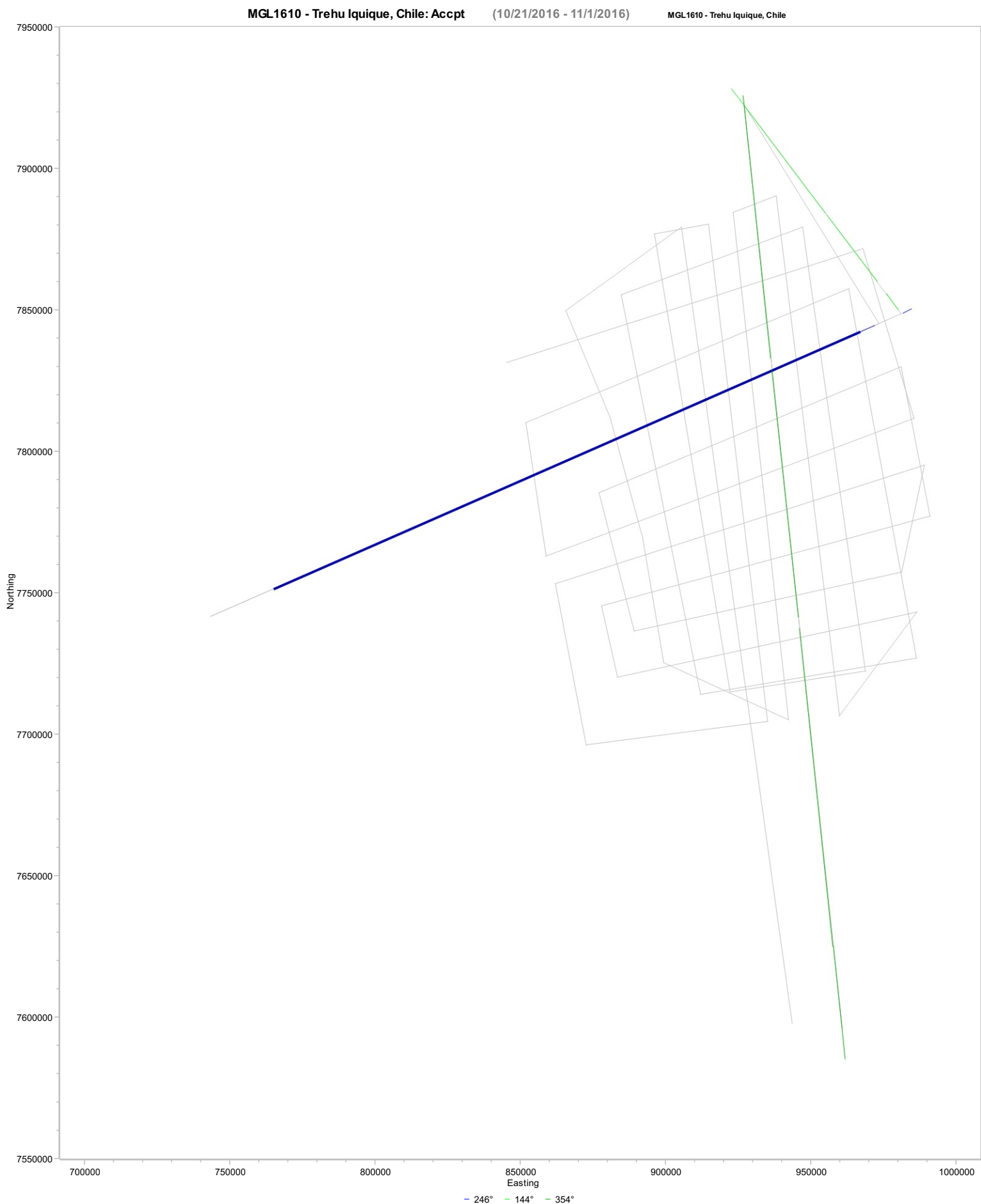
MGL1610 - Trehu Iquique, Chile (MGL1610)

Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
3	OBS01	245.8	10797	1966	Prime	220.80	4.967	Part	Midnight
Total						220.80			



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Daily Science Report

11/2/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Wed 02 Nov

The Vessel started the day continuing production on line: MGL1610OBS01 . At ~02:34 UTC the vessel ended line OBS01 and started to recover the source. Once the source was on-board the vessel made its way back to OBS Station #21 to recovery this OBS. Once the Data from OBSS21 had been downloaded the OBS was re-deployed. Shortly after the OBS was redeployed the vessel deployed Geomar's Wave Glider. Once was accomplished the vessel move a short distance and start to deployment of the 12.6km streamer. The Steamer deployment started at ~08:44 UTC and was completed at 18:58 UTC. The vessel then re-deployed the source and maneuvered towards line MGL1610MCS01. Production began on MCS01 at 22:29 UTC and continue throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Wed 02 Nov

The Vessel will start the day continuing production on Line - MCS01 and is expected to continue this way throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 2. Nov 00:00	Wed 2. Nov 02:34	2.567
SOL Seq 3 MGL1610OBS01 FGSP=1966 Hdg=245.8° Prime EOL Seq 3 MGL1610OBS01 LGSP= 1018 Complete EOL Water Depth=4678m				
Field Operations	SB_FO	Wed 2. Nov 02:34	Wed 2. Nov 04:07	1.550
Recovery of Source - to conduct OBS Recovery/Deployment, Wave Glider Deployment and to Deploy Streamer.				
Transit	SB_TRT	Wed 2. Nov 04:07	Wed 2. Nov 05:24	1.283
Transit to Recovery Site of OBSS21				
Field Operations	SB_FO	Wed 2. Nov 05:24	Wed 2. Nov 07:12	1.800
Recovery of OBSS21				
Field Operations	SB_FO	Wed 2. Nov 07:12	Wed 2. Nov 07:25	0.217
Servicing OBSS21 for re-deploy ment				
Field Operations	SB_FO	Wed 2. Nov 07:25	Wed 2. Nov 07:34	0.150
Deployment of OBSS21				
Field Operations	SB_FO	Wed 2. Nov 07:34	Wed 2. Nov 08:17	0.717
Deployment of Geomar Wave Glider				
Transit	SB_TRT	Wed 2. Nov 08:17	Wed 2. Nov 08:44	0.450
Transit to Steamer Deploy ment Site				
Deployment	MB_DP	Wed 2. Nov 08:44	Wed 2. Nov 18:52	10.133
Deploying Steamer				
Field Operations	SB_FO	Wed 2. Nov 18:52	Wed 2. Nov 19:59	1.117
Deployment of Energy Source				
Field Operations	SB_FO	Wed 2. Nov 19:59	Wed 2. Nov 20:54	0.917
Maneuvering towards Line				
Cetacean	SB_CT	Wed 2. Nov 20:54	Wed 2. Nov 21:25	0.517
Rampup of Source				
Field Operations	SB_FO	Wed 2. Nov 21:25	Wed 2. Nov 22:29	1.067
Maneuvering towards Line.				
Recording	DT_RC	Wed 2. Nov 22:29	Wed 2. Nov 23:19	0.833
NTBP Seq 4 MCS03 FSP=4750 LSP=4868				
Production Prime	AC_PP	Wed 2. Nov 23:19	Wed 2. Nov 24:00	0.683
SOL Seq 4 MGL1610MCS03 FGSP=4869 Hdg=65.8° Prime MSP Seq 4 MGL1610MCS03 LGSP=4973 Midnight SOL Water Depth=4630m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

2-Nov	Hours	% Percent
Acquisition	3.250	13.542
Production Prime	3.250	13.542
Chargeable Standby	9.783	40.764
Cetacean	0.517	2.153
Field Operations	7.533	31.389
Transit	1.733	7.222



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2-Nov	Hours	% Percent
DownTime	0.833	3.472
Recording	0.833	3.472
Mobilisation	10.133	42.222
Deployment	10.133	42.222
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
DownTime	3.850	1.337
Cetacean	3.017	1.047
Recording	0.833	0.289
Chargeable Standby	106.083	36.834
Cetacean	1.033	0.359
Field Operations	21.667	7.523
Transit	83.383	28.953
Mobilisation	86.700	30.104
Deployment	31.817	11.047
Mob Ashore	43.350	15.052
Testing	6.000	2.083
Transit to Prospect	5.533	1.921
Acquisition	76.950	26.719
Prime Line Change	2.650	0.920
Production Prime	74.300	25.799
Demobilisation	14.417	5.006
Recovery	14.417	5.006
Total	288.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 02 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 02 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guérin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henríquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student



11/2/2016

Page 3

Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Wed 2 Nov	Marcus G Langseth	3 - 4	29.90
Total Production:			29.90

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	29.90	427.48	250.70	684.05
Infill	0.00	0.00	0.00	0.00
Combined	29.90	427.48	250.70	684.05
Total				
Prime	29.90	427.48	250.70	684.05
Infill	0.00	0.00	0.00	0.00
Combined	29.90	427.48	250.70	684.05

Production Listing (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

MGL1610 - Trehu Iquique, Chile (MGL1610)

Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
3	OBS01	245.8	1965	1018	Prime	23.70	4.981	Complete	Complete
4	MCS03	65.8	11363	11115	Prime	6.20	4.899	Part	Midnight
NTBP: 11601 - 11364 (not chgd)									
Total						29.90			





Daily Science Report

11/2/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Wed 02 Nov

The Vessel started the day continuing production on line: MGL1610OBS01 . At ~02:34 UTC the vessel ended line OBS01 and started to recover the source. Once the source was on-board the vessel made its way back to OBS Station #21 to recovery this OBS. Once the Data from OBSS21 had been downloaded the OBS was re-deployed. Shortly after the OBS was redeployed the vessel deployed Geomar's Wave Glider. Once was accomplished the vessel move a short distance and start to deployment of the 12.6km streamer. The Steamer deployment started at ~08:44 UTC and was completed at 18:58 UTC. The vessel then re-deployed the source and maneuvered towards line MGL1610MCS01. Production began on MCS01 at 22:29 UTC and continue throughout the rest of the day, however the FGSP was not until after the Day Change. There where a number of error in the Navigation, Source, and MCS Recording system that had to be corrected.

Daily Comment Summaries - Plan for Tomorrow

Wed 02 Nov

The Vessel will start the day continuing production on Line - MCS01 and is expected to continue this way throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 2. Nov 00:00	Wed 2. Nov 02:34	2.567
SOL Seq 3 MGL1610OBS01 FGSP=1966 Hdg=245.8° Prime EOL Seq 3 MGL1610OBS01 LGSP= 1018 Complete EOL Water Depth=4678m				
Field Operations	SB_FO	Wed 2. Nov 02:34	Wed 2. Nov 04:07	1.550
Recovery of Source - to conduct OBS Recovery/Deployment, Wave Glider Deployment and to Deploy Streamer.				
Transit	SB_TRT	Wed 2. Nov 04:07	Wed 2. Nov 05:24	1.283
Transit to Recovery Site of OBSS21				
Field Operations	SB_FO	Wed 2. Nov 05:24	Wed 2. Nov 07:12	1.800
Recovery of OBSS21				
Field Operations	SB_FO	Wed 2. Nov 07:12	Wed 2. Nov 07:25	0.217
Servicing OBSS21 for re-deployment				
Field Operations	SB_FO	Wed 2. Nov 07:25	Wed 2. Nov 07:34	0.150
Deployment of OBSS21				
Field Operations	SB_FO	Wed 2. Nov 07:34	Wed 2. Nov 08:17	0.717
Deployment of Geomar Wave Glider				
Transit	SB_TRT	Wed 2. Nov 08:17	Wed 2. Nov 08:44	0.450
Transit to Streamer Deployment Site				
Deployment	MB_DP	Wed 2. Nov 08:44	Wed 2. Nov 18:52	10.133
Deploying Streamer				
Field Operations	SB_FO	Wed 2. Nov 18:52	Wed 2. Nov 19:59	1.117
Deployment of Energy Source				
Field Operations	SB_FO	Wed 2. Nov 19:59	Wed 2. Nov 20:54	0.917
Maneuvering towards Line				
Cetacean	SB_CT	Wed 2. Nov 20:54	Wed 2. Nov 21:25	0.517
Rampup of Source				
Field Operations	SB_FO	Wed 2. Nov 21:25	Wed 2. Nov 22:29	1.067
Maneuvering towards Line.				
Recording	DT_RC	Wed 2. Nov 22:29	Wed 2. Nov 24:00	1.517
NTBP Seq 4 MCS03 FSP=4750 LSP=4972 Multiple Error on a number of System is the Main Lab.				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

2-Nov	Hours	% Percent
Acquisition	2.567	10.694
Production Prime	2.567	10.694
Chargeable Standby	9.783	40.764
Cetacean	0.517	2.153
Field Operations	7.533	31.389
Transit	1.733	7.222
DownTime	1.517	6.319
Recording	1.517	6.319



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2-Nov	Hours	% Percent
Mobilisation	10.133	42.222
Deployment	10.133	42.222
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
DownTime	4.533	1.574
Cetacean	3.017	1.047
Recording	1.517	0.527
Chargeable Standby	106.083	36.834
Cetacean	1.033	0.359
Field Operations	21.667	7.523
Transit	83.383	28.953
Mobilisation	86.700	30.104
Deployment	31.817	11.047
Mob Ashore	43.350	15.052
Testing	6.000	2.083
Transit to Prospect	5.533	1.921
Acquisition	76.267	26.481
Prime Line Change	2.650	0.920
Production Prime	73.617	25.561
Demobilisation	14.417	5.006
Recovery	14.417	5.006
Total	288.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 02 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 02 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
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Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Wed 2 Nov	Marcus G Langseth	3	23.70
Total Production:			23.70

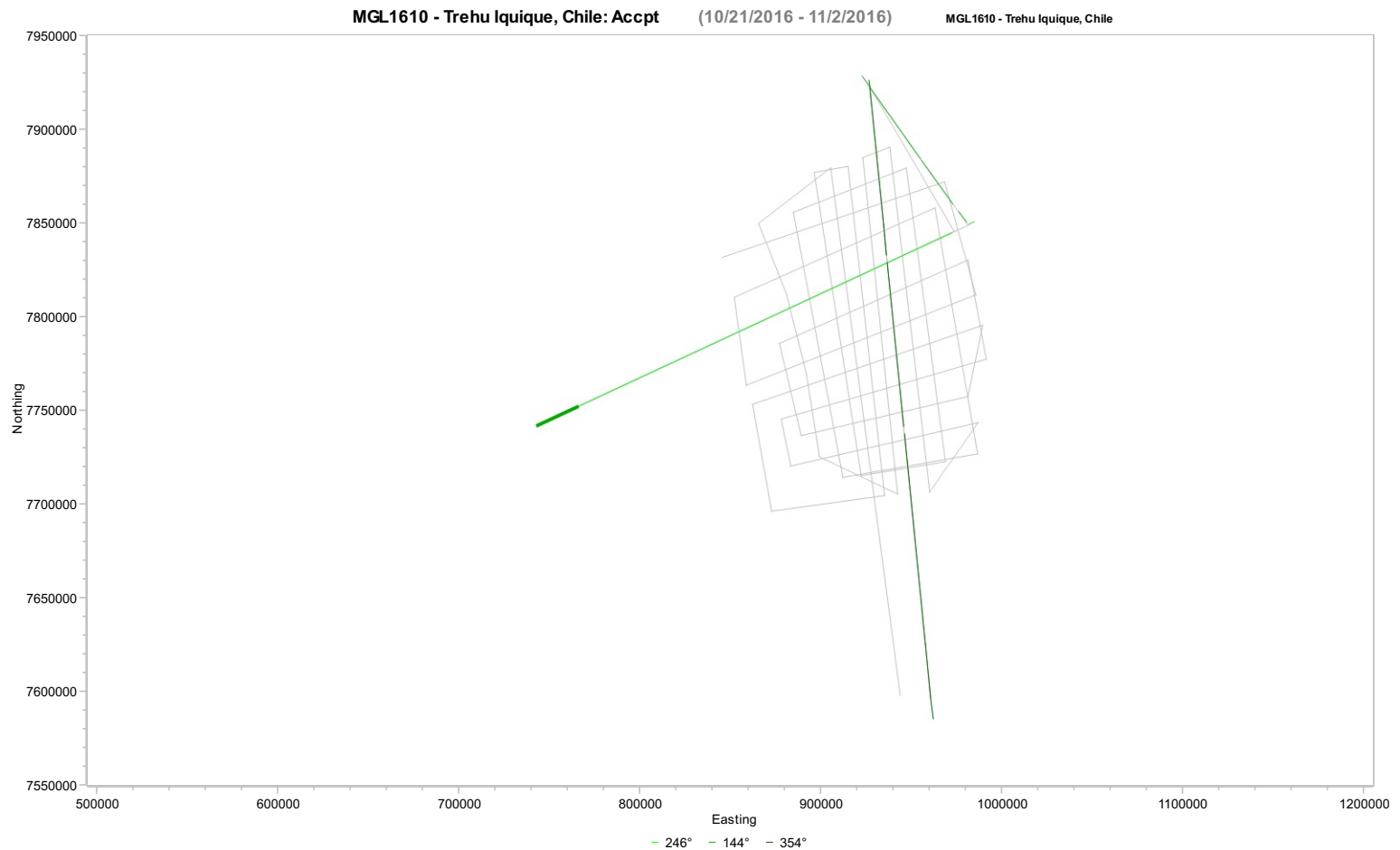
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	23.70	421.28	244.50	677.85
Infill	0.00	0.00	0.00	0.00
Combined	23.70	421.28	244.50	677.85
Total				
Prime	23.70	421.28	244.50	677.85
Infill	0.00	0.00	0.00	0.00
Combined	23.70	421.28	244.50	677.85

Production Listing (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

MGL1610 - Trehu Iquique, Chile (MGL1610)

Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
3	OBS01	245.8	1965	1018	Prime	23.70	4.981	Complete	Complete
4	MCS03	65.8	N/A	N/A	Prime	0.00	0.000	Part	Midnight
NTBP: 11601 - 11115 (not chgd)									
Total						23.70			





Daily Science Report

11/3/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Thu 03 Nov

The Vessel started the day continuing production on Line - MCS01. At 21:24 UTC the souce was powered down due to a PSO Sighting. Once the Area was clear the source was ramped back up and at 22:28 UTC production resumed on Line MGCS01A. This continued throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Thu 03 Nov

The Vessel will start the day continuing production on MCS01A. It is expected that at ~09:50 UTC that the vessel will complete this line and start a normal line change to line MCS02. It is expected to continue through the end of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Recording	DT_RC	Thu 3. Nov 00:00	Thu 3. Nov 00:10	0.167
NTBP Seq 4 MCS01 FSP=4973 LSP=5000 Multiple Error on a number of System is the Main Lab.				
Production Prime	AC_PP	Thu 3. Nov 00:10	Thu 3. Nov 21:24	21.233
SOL Seq 4 MGL1610MCS01 FGSP=5001 Hdg=65.8° Prime EOL Seq 4 MGL1610MCS03 LGSP=8273 SOL Water Depth=4630m Last good Shotpoint due to MMO Sighting of pinniped.				
Cetacean	DT_CT	Thu 3. Nov 21:24	Thu 3. Nov 21:46	0.367
NTBP Seq 4 MCS01 FSP=8274 LSP=8323 Due to MMO Sighting of pinniped.				
Cetacean	DT_CT	Thu 3. Nov 21:46	Thu 3. Nov 22:28	0.700
Downtime due shutdown of the source for MMO Sighting of pinniped and ramping back up of source.				
Production Prime	AC_PP	Thu 3. Nov 22:28	Thu 3. Nov 24:00	1.533
SOL Seq 5 MGL1610MCS01A FGSP=8274 Hdg=65.8° Prime MSP Seq 5 MGL1610MCS03A LGSP=8630 SOL Water Depth=4562m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

3-Nov	Hours	% Percent
Acquisition	22.767	94.861
Production Prime	22.767	94.861
DownTime	1.233	5.139
Cetacean	1.067	4.444
Recording	0.167	0.694
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
DownTime	5.767	1.848
Cetacean	4.083	1.309
Recording	1.683	0.540
Chargeable Standby	106.083	34.001
Cetacean	1.033	0.331
Field Operations	21.667	6.944
Transit	83.383	26.725
Mobilisation	86.700	27.788
Deployment	31.817	10.198
Mob Ashore	43.350	13.894
Testing	6.000	1.923
Transit to Prospect	5.533	1.774
Acquisition	99.033	31.741
Prime Line Change	2.650	0.849
Production Prime	96.383	30.892
Demobilisation	14.417	4.621



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Category	Hours	% Percent
Recovery	14.417	4.621
Total	312.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 03 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Thu 03 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

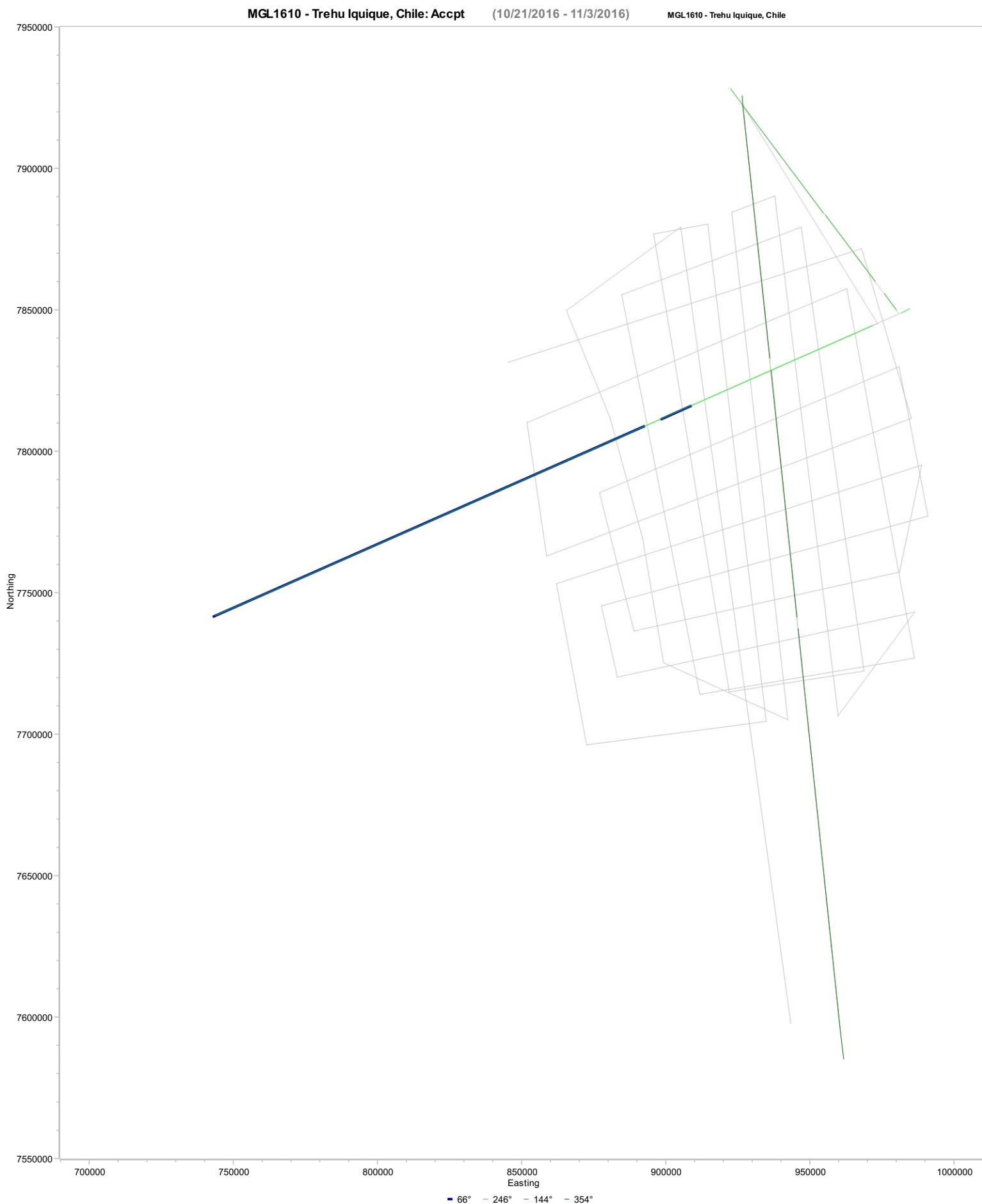
Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhissi GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Thu 3 Nov	Marcus G Langseth	4 - 5	174.60
Total Production:			174.60

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	174.60	595.88	419.10	852.45
Infill	0.00	0.00	0.00	0.00
Combined	174.60	595.88	419.10	852.45
Total				
Prime	174.60	595.88	419.10	852.45
Infill	0.00	0.00	0.00	0.00
Combined	174.60	595.88	419.10	852.45





Daily Science Report

11/4/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Fri 04 Nov

The Vessel started the day continuing production on Line - MCS01A. At 09:53 UTC they vessel completed Line MCS01A and made a normal line change to Line MCS02. Line MCS02 was started at 13:37 UTC and Continued throughout the rest of the day. During Line MCS02 there were two powerdowns for PSO Sightings. The vessel also Deviated (Offset) off-line to avoid a Long - Line and his gear from 18:19 UTC to 22:16 UTC all the time remaining in production.

Daily Comment Summaries - Plan for Tomorrow

Fri 04 Nov

The vessel will start the day in production on Line MCS02, which it is expected to complete at ~02:16 UTC. At which time the vessel will make a normal line change to Line MCS03, which is expected to begin at ~05:18 UTC and continue throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Fri 4. Nov 00:00	Fri 4. Nov 09:53	9.883
SOL Seq 5 MGL1610MCS01A FGSP=8629 Hdg=65.8° Prime EOL Seq 5 MGL1610MCS03A LGSP=10170 EOL Water Depth=730m				
Prime Line Change	AC_PLC	Fri 4. Nov 09:53	Fri 4. Nov 13:37	3.733
Nominal Prime line change.				
Production Prime	AC_PP	Fri 4. Nov 13:37	Fri 4. Nov 14:33	0.933
SOL Seq 6 MGL1610MCS02 FGSP=10890 Hdg=328.8° Prime EOL Seq 6 MGL1610MCS02 LGSP=11042 Incomplete SOL Water Depth=743m				
Cetacean	DT_CT	Fri 4. Nov 14:33	Fri 4. Nov 14:48	0.250
NTBP Seq 6 MCS02 FSP=11043 LSP=11081				
Production Prime	AC_PP	Fri 4. Nov 14:48	Fri 4. Nov 22:12	7.400
SOL Seq 6 MGL1610MCS02 FGSP=11082 Hdg=328.8° Prime EOL Seq 6 MGL1610MCS02 LGSP=12238 Incomplete				
Cetacean	DT_CT	Fri 4. Nov 22:12	Fri 4. Nov 22:17	0.083
NTBP Seq 6 MCS02 FSP=12239 LSP=12252				
Production Prime	AC_PP	Fri 4. Nov 22:17	Fri 4. Nov 24:00	1.717
SOL Seq 6 MGL1610MCS02 FGSP=12253 Hdg=328.8° Prime MSP Seq 6 MGL1610MCS02 LGSP=12540 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

4-Nov	Hours	% Percent
Acquisition	23.667	98.611
Prime Line Change	3.733	15.556
Production Prime	19.933	83.056
DownTime	0.333	1.389
Cetacean	0.333	1.389
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
DownTime	6.100	1.815
Cetacean	4.417	1.314
Recording	1.683	0.501
Chargeable Standby	106.083	31.572
Cetacean	1.033	0.308
Field Operations	21.667	6.448
Transit	83.383	24.816
Mobilisation	86.700	25.804
Deployment	31.817	9.469
Mob Ashore	43.350	12.902
Testing	6.000	1.786
Transit to Prospect	5.533	1.647
Acquisition	122.700	36.518
Prime Line Change	6.383	1.900



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Category	Hours	% Percent
Production Prime	116.317	34.618
Demobilisation	14.417	4.291
Recovery	14.417	4.291
Total	336.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 04 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Source Volume at 6590, but source Elements currently disabled for time issues. S1G2, S2G8, S4G6, and S4G10

General Purpose Science:

Engine Room made repairs to Drain plumbing under WetLab Sink after it started leaking. This required USS, TSG, pC02, and MicroSV to be secured during the repairs.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Fri 04 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
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Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisiñi GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Fri 4 Nov	Marcus G Langseth	5 - 6	156.85
Total Production:			156.85

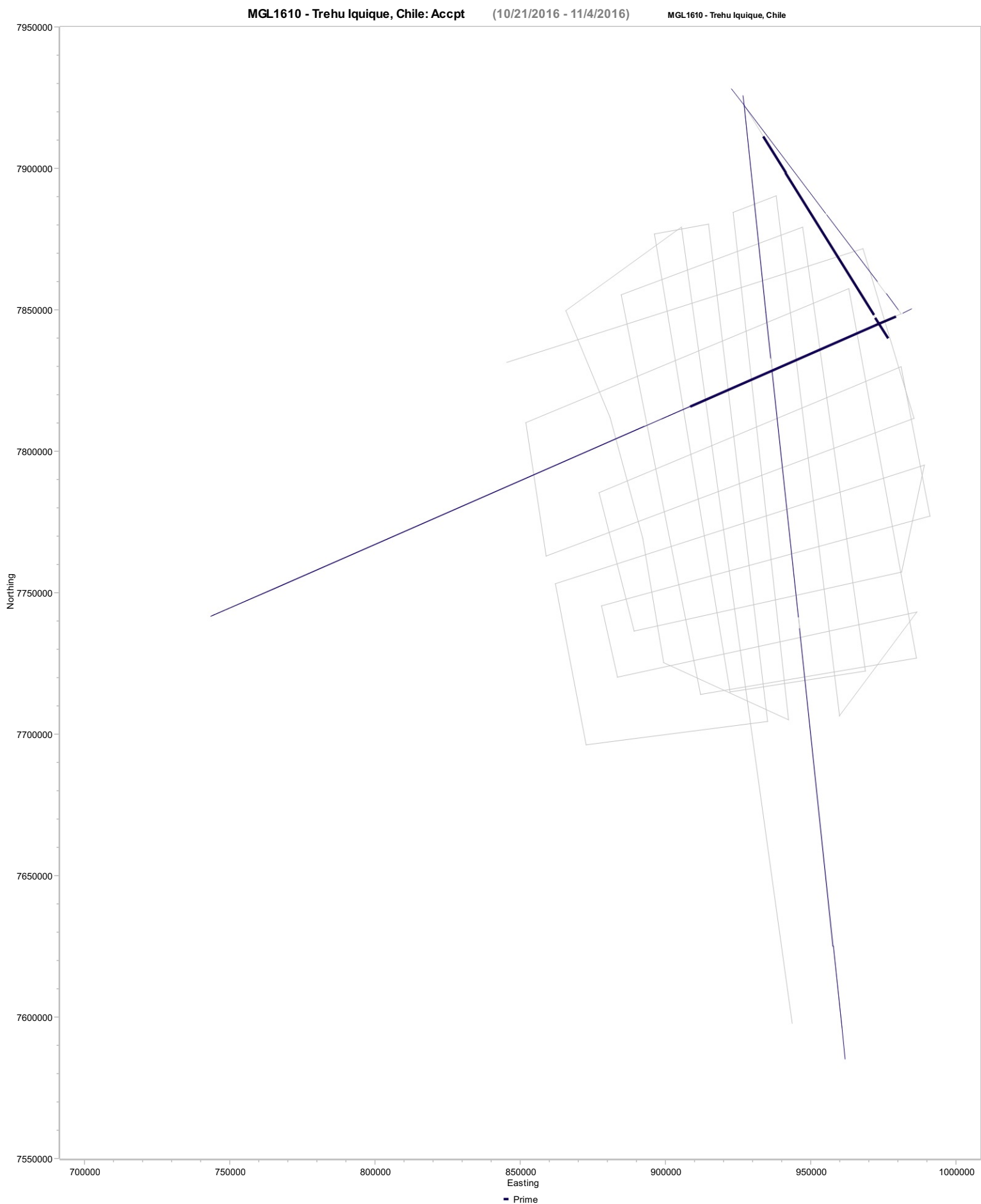
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	156.85	752.72	575.95	1009.30
Infill	0.00	0.00	0.00	0.00
Combined	156.85	752.72	575.95	1009.30
Total				
Prime	156.85	752.72	575.95	1009.30
Infill	0.00	0.00	0.00	0.00
Combined	156.85	752.72	575.95	1009.30



11/4/2016

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Daily Science Report

11/5/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sat 05 Nov

The vessel started the day in production on Line MCS02, which was completed at ~02:16 UTC. The vessel will made a normal line change to Line MCS03,. This line begin at ~05:18 UTC and continue throughout the day.

Daily Comment Summaries - Plan for Tomorrow

Sat 05 Nov

The vessel will start the day in production on Line MCS03, It is expected that this line will continue until ~23:00 UTC. At that time vessel will start maneuvering to recover the streamer so as to shorten it up to 8.1 Km

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sat 5. Nov 00:00	Sat 5. Nov 02:16	2.267
SOL Seq 6 MGL1610MCS02 FGSP=12541 Hdg=328.8° Prime EOL Seq 6 MGL1610MCS02 LGSP=12924 Complete EOL Water Depth=1455m				
Prime Line Change	AC_PLC	Sat 5. Nov 02:16	Sat 5. Nov 05:18	3.033
Nominal Prime line change.				
Production Prime	AC_PP	Sat 5. Nov 05:18	Sat 5. Nov 24:00	18.700
SOL Seq 7 MGL1610MCS03 FGSP=13001 Hdg=174.1° Prime MSP Seq 7 MGL1610MCS03 LGSP=167021 Midnight SOL Water Depth=1376m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

5-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	3.033	12.639
Production Prime	20.967	87.361
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
DownTime	6.100	1.694
Cetacean	4.417	1.227
Recording	1.683	0.468
Chargeable Standby	106.083	29.468
Cetacean	1.033	0.287
Field Operations	21.667	6.019
Transit	83.383	23.162
Mobilisation	86.700	24.083
Deployment	31.817	8.838
Mob Ashore	43.350	12.042
Testing	6.000	1.667
Transit to Prospect	5.533	1.537
Acquisition	146.700	40.750
Prime Line Change	9.417	2.616
Production Prime	137.283	38.134
Demobilisation	14.417	4.005
Recovery	14.417	4.005
Total	360.000	



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Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 05 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Source Volume at 6590, but source Elements currently disabled for time issues. S1G2, S2G8, S4G6, and S4G10

General Purpose Science:

In the afternoon the Magnetometer (S/N: 882402) started showing erratic readings and was recovered for trouble shooting. The first thing that was tried was to remove the short jumper on the nose of the Maggie. The Magnetometer (S/N: 882402) was redeployed with the Tow Leader connected directly to the fish. The Magnetometer (S/N: 882402) still showed erratic readings. It was recovered again and swapped out with the Magnetometer (S/N: 882679) which was showing similar errors on the 30th of Oct. The only difference this deployment Vs the deployment on the 30th of Oct is that the short jumper in the nose has been removed. This jumper on both Maggie's show shorts when the Megger was used to check for leakage.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sat 05 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer - Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sat 5 Nov	Marcus G Langseth	6 - 7	172.75
Total Production:			172.75

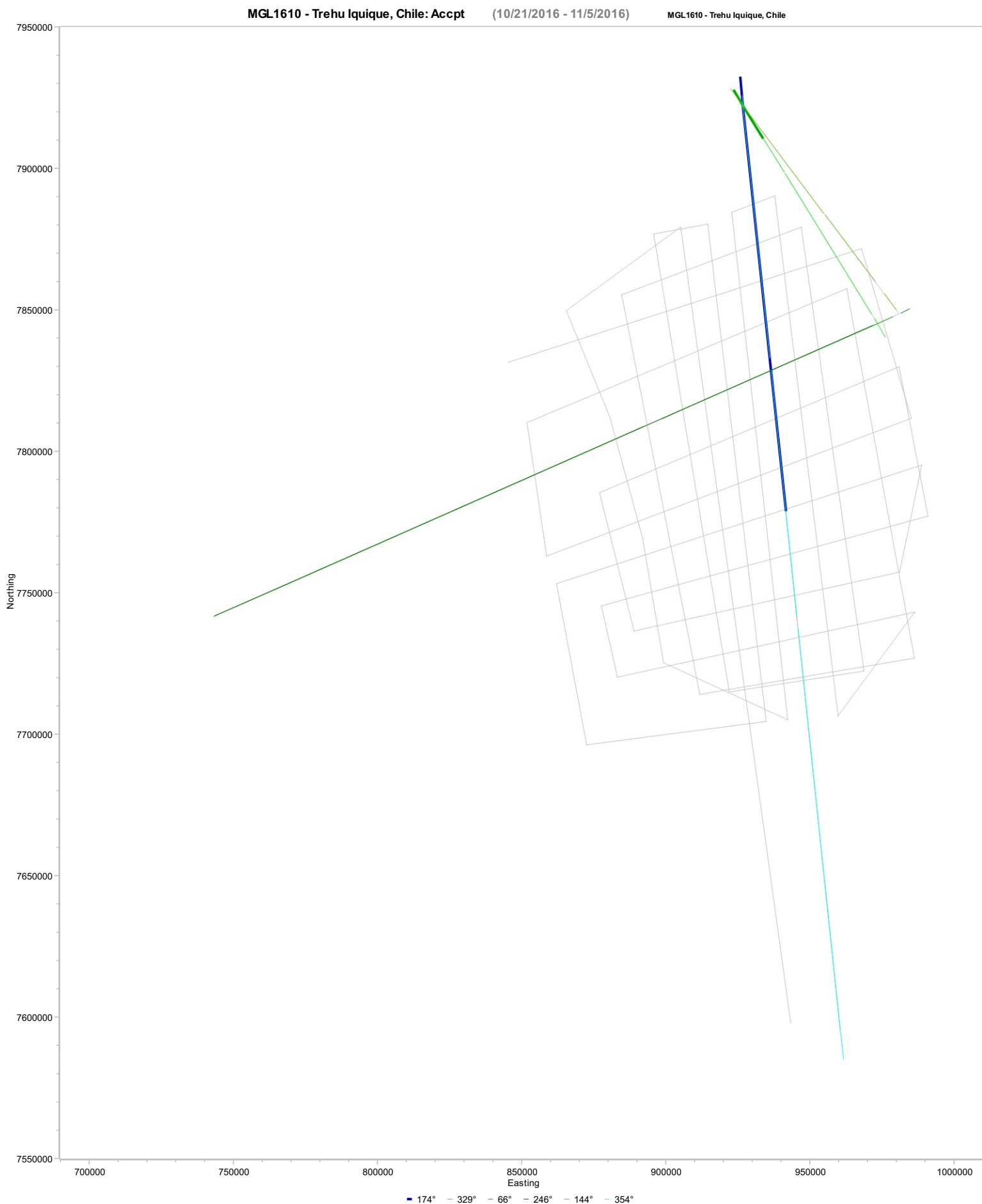
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	172.75	925.47	748.70	1182.05
Infill	0.00	0.00	0.00	0.00
Combined	172.75	925.47	748.70	1182.05
Total				
Prime	172.75	925.47	748.70	1182.05
Infill	0.00	0.00	0.00	0.00
Combined	172.75	925.47	748.70	1182.05



11/5/2016

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Daily Science Report

11/6/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sun 06 Nov

The Day started with the vessel in production on Line MCS03 heading to the south. There was a couple of power-downs for PSO Sightings and at 23:42 UTC the line was completed. The Crew then began recovering the Source, PAM and MAGGIE, so the streamer can be recovered and shortened up to 8.1 km,

Daily Comment Summaries - Plan for Tomorrow

Sun 06 Nov

The Vessel will start the day by continuing recover the of the Source, PAM and MAGGIE. Once on-board the recovery of the streamer and reconfiguration of the streamer will commence. This is expected to be completed early morning and by ~13:00 UTC the vessel will begin production on Line MCS16A heading to the north. It is expected to remain in this mode throughout the remainder of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 6. Nov 00:00	Sun 6. Nov 15:15	15.250
SOL Seq 7 MGL1610MCS01 FGSP=16072 Hdg=174.1° Prime EOL Seq 7 MGL1610MCS01 LGSP=18567 Incomplete				
Cetacean	DT_CT	Sun 6. Nov 15:15	Sun 6. Nov 15:22	0.117
NTBP Seq 7 MCS01 FSP=18568 LSP=18583				
Production Prime	AC_PP	Sun 6. Nov 15:22	Sun 6. Nov 16:07	0.750
SOL Seq 7 MGL1610MCS01 FGSP=18584 Hdg=174.1° Prime EOL Seq 7 MGL1610MCS01 LGSP=18699 Incomplete				
Cetacean	DT_CT	Sun 6. Nov 16:07	Sun 6. Nov 16:21	0.233
NTBP Seq 7 MCS01 FSP=18700 LSP=18733				
Production Prime	AC_PP	Sun 6. Nov 16:21	Sun 6. Nov 23:42	7.350
SOL Seq 7 MGL1610MCS01 FGSP=18734 Hdg=174.1° Prime EOL Seq 7 MGL1610MCS01 LGSP=198637 Complete EOL Water Depth=1261m				
Cable Reconfig	SB_REC_CR	Sun 6. Nov 23:42	Sun 6. Nov 24:00	0.300
Recoverie Source to Re-Configure streamer from 12.6km to 8km.				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

6-Nov	Hours	% Percent
Acquisition	23.350	97.292
Production Prime	23.350	97.292
Chargeable Standby	0.300	1.250
Reconfiguration	0.300	1.250
Cable Reconfig	0.300	1.250
DownTime	0.350	1.458
Cetacean	0.350	1.458
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	106.383	27.704
Cetacean	1.033	0.269
Field Operations	21.667	5.642
Reconfiguration	0.300	0.078
Cable Reconfig	0.300	0.078
Transit	83.383	21.714
DownTime	6.450	1.680
Cetacean	4.767	1.241
Recording	1.683	0.438
Mobilisation	86.700	22.578
Deployment	31.817	8.286
Mob Ashore	43.350	11.289
Testing	6.000	1.562
Transit to Prospect	5.533	1.441
Acquisition	170.050	44.284
Prime Line Change	9.417	2.452



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Category	Hours	% Percent
Production Prime	160.633	41.832
Demobilisation	14.417	3.754
Recovery	14.417	3.754
Total	384.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 06 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Need to test Magnetometer (S/N: 882402) to confirm erratic readings.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 06 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guérin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
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Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

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Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Husni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sun 6 Nov	Marcus G Langseth	7	130.58
Total Production:			130.58

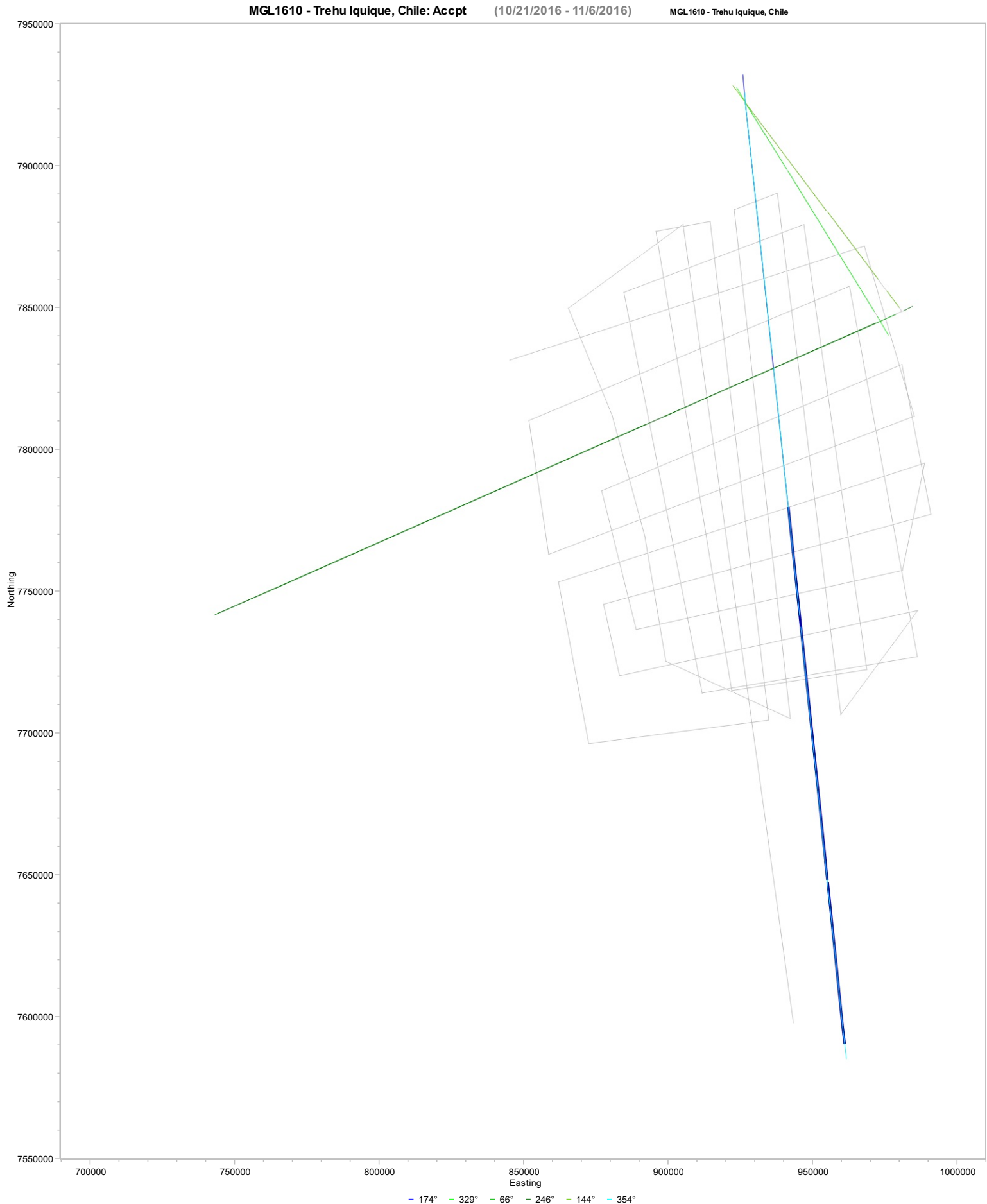
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	130.58	1056.05	879.28	1312.63
Infill	0.00	0.00	0.00	0.00
Combined	130.58	1056.05	879.28	1312.63
Total				
Prime	130.58	1056.05	879.28	1312.63
Infill	0.00	0.00	0.00	0.00
Combined	130.58	1056.05	879.28	1312.63



11/6/2016

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Daily Science Report

11/7/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Mon 07 Nov

The Vessel started day by continuing recovering the of the Source, PAM and MAGGIE. Once on-board the recovery of the streamer and reconfiguration of the streamer will commence. All towed equipment was re-deployed and ramp up of the source was completed at 11:15 UTC. There was a issue with a single element on Sub-Array one which required it to be recovered and then re-deployed before production could commence. Line MCS16A was started at 12:42 UTC and production continued throughout the remainder of the day. There were a 3 power-downs for PSO Sightings during the day.

Daily Comment Summaries - Plan for Tomorrow

Mon 07 Nov

The Vessel will start the day in production on line MCS16A. This line is expected to continue until ~14:30 UTC. At that time the vessel will make a line change to line MCS15.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Cable Reconfig	SB_REC_CR	Mon 7. Nov 00:00	Mon 7. Nov 01:05	1.083
Recovering Source to Re-Configure streamer from 12.6km to 8km.				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 01:05	Mon 7. Nov 04:50	3.750
Recovering 6km of Streamer				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 04:50	Mon 7. Nov 06:22	1.533
Deploying Streamer #2				
Transit	SB_TRT	Mon 7. Nov 06:22	Mon 7. Nov 09:17	2.917
Transiting towards line waiting for Sunup to Start Source Deployment.				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 09:17	Mon 7. Nov 10:43	1.433
Deploying of Source.				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 10:43	Mon 7. Nov 11:15	0.533
Ramping up the Source				
Source	DT_SC	Mon 7. Nov 11:15	Mon 7. Nov 12:27	1.200
Element Maintenance on Sub-Array 1				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 12:27	Mon 7. Nov 12:42	0.250
Transiting in to First Shot Point.				
Production Prime	AC_PP	Mon 7. Nov 12:42	Mon 7. Nov 16:34	3.867
SOL Seq 8 MGL1610MCS16A FGSP=19932 Hdg=353.4° Prime EOL Seq 8 MGL1610MCS16A LGSP=20192 Incomplete				
Cetacean	DT_CT	Mon 7. Nov 16:34	Mon 7. Nov 17:06	0.533
NTBP Seq 8 MCS16A FSP=20193 LSP=20226				
Production Prime	AC_PP	Mon 7. Nov 17:06	Mon 7. Nov 19:08	2.033
SOL Seq 8 MGL1610MCS16A FGSP=20227 Hdg=353.4° Prime EOL Seq 8 MGL1610MCS16A LGSP=20358 Incomplete				
Cetacean	DT_CT	Mon 7. Nov 19:08	Mon 7. Nov 19:11	0.050
NTBP Seq 8 MCS16A FSP=20359 LSP=20363				
Production Prime	AC_PP	Mon 7. Nov 19:11	Mon 7. Nov 21:56	2.750
SOL Seq 8 MGL1610MCS16A FGSP=20364 Hdg=353.4° Prime EOL Seq 8 MGL1610MCS16A LGSP=20546 Incomplete				
Cetacean	DT_CT	Mon 7. Nov 21:56	Mon 7. Nov 22:19	0.383
NTBP Seq 8 MCS16A FSP=20547 LSP=20571				
Production Prime	AC_PP	Mon 7. Nov 22:19	Mon 7. Nov 24:00	1.683
SOL Seq 8 MGL1610MCS16A FGSP=20572 Hdg=353.4° Prime MSP Seq 8 MGL1610MCS16A LGSP=20686 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

7-Nov	Hours	% Percent
Acquisition	10.333	43.056
Production Prime	10.333	43.056
Chargeable Standby	11.500	47.917
Reconfiguration	8.583	35.764
Cable Reconfig	8.583	35.764
Transit	2.917	12.153
DownTime	2.167	9.028
Cetacean	0.967	4.028



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7-Nov	Hours	% Percent
Source	1.200	5.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	28.893
Cetacean	1.033	0.253
Field Operations	21.667	5.310
Reconfiguration	8.883	2.177
Cable Reconfig	8.883	2.177
Transit	86.300	21.152
DownTime	8.617	2.112
Cetacean	5.733	1.405
Recording	1.683	0.413
Source	1.200	0.294
Mobilisation	86.700	21.250
Deployment	31.817	7.798
Mob Ashore	43.350	10.625
Testing	6.000	1.471
Transit to Prospect	5.533	1.356
Acquisition	180.383	44.212
Prime Line Change	9.417	2.308
Production Prime	170.967	41.904
Demobilisation	14.417	3.533
Recovery	14.417	3.533
Total	408.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 07 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Need to test Magnetometer (S/N: 882402) to confirm erratic readings.

Miscellaneous:

No Major Issues to Report



11/7/2016

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Daily Comment Summaries - Personnel Onboard

Mon 07 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

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Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Mon 7 Nov	Marcus G Langseth	8	73.45
Total Production:			73.45

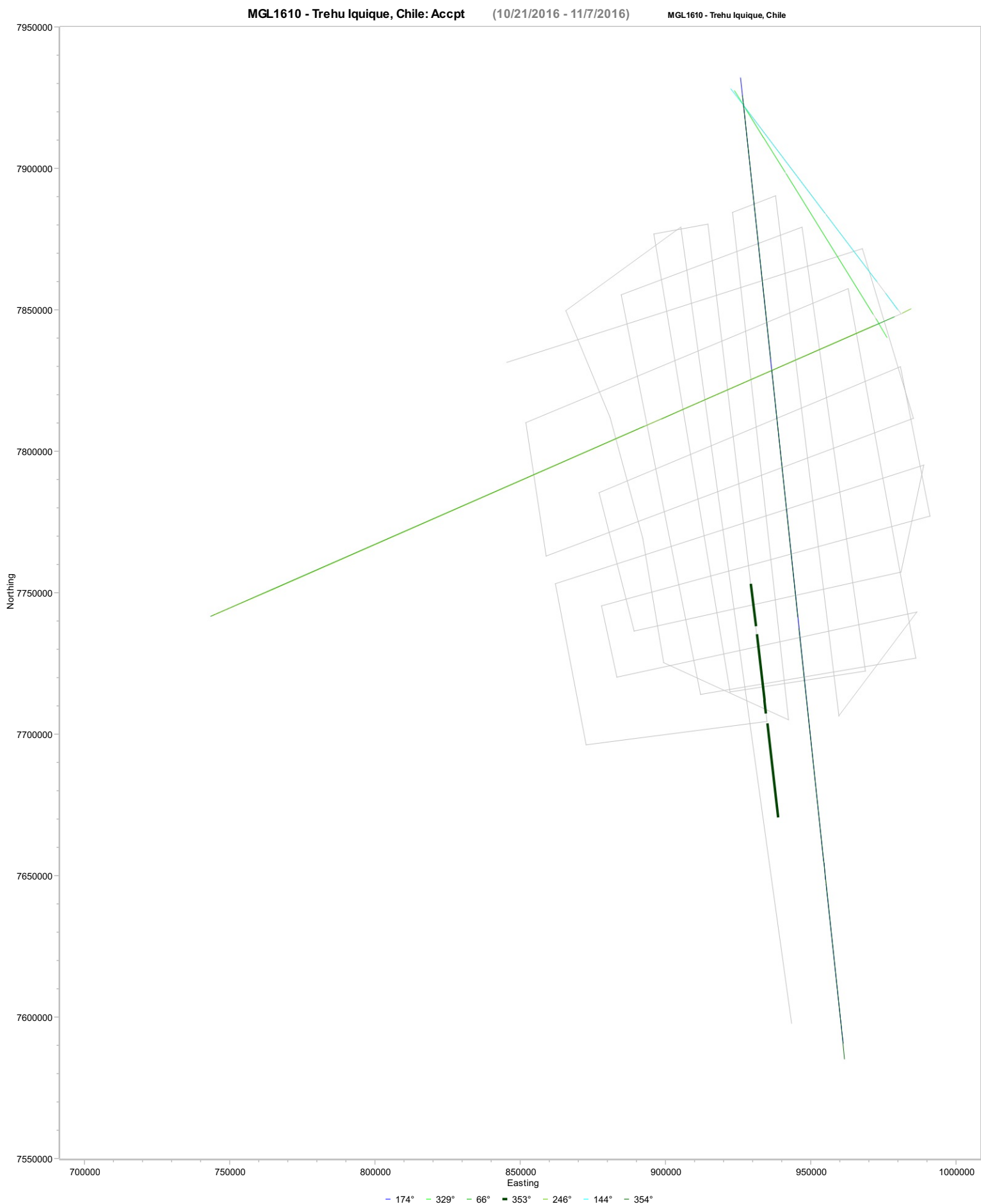
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	73.45	73.45	952.73	1386.08
Infill	0.00	0.00	0.00	0.00
Combined	73.45	73.45	952.73	1386.08
Total				
Prime	73.45	73.45	952.73	1386.08
Infill	0.00	0.00	0.00	0.00
Combined	73.45	73.45	952.73	1386.08



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Daily Science Report

11/7/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Mon 07 Nov

The Vessel started day by continuing recovering the of the Source, PAM and MAGGIE. Once on-board the recovery of the streamer and reconfiguration of the streamer will commence. All towed equipment was re-deployed and ramp up of the source was completed at 11:15 UTC. There was a issue with a single element on Sub-Array one which required it to be recovered and then re-deployed before production could commence. Line MCS16A was started at 12:42 UTC and production continued throughout the remainder of the day. There were a 3 power-downs for PSO Sightings during the day.

Daily Comment Summaries - Plan for Tomorrow

Mon 07 Nov

The Vessel will start the day in production on line MCS16A. This line is expected to continue until ~14:30 UTC. At that time the vessel will make a line change to line MCS15.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Cable Reconfig	SB_REC_CR	Mon 7. Nov 00:00	Mon 7. Nov 01:05	1.083
Recovering Source to Re-Configure streamer from 12.6km to 8km.				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 01:05	Mon 7. Nov 04:50	3.750
Recovering 6km of Streamer				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 04:50	Mon 7. Nov 06:22	1.533
Deploying Streamer #2				
Transit	SB_TRT	Mon 7. Nov 06:22	Mon 7. Nov 09:17	2.917
Transiting towards line waiting for Sunup to Start Source Deployment.				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 09:17	Mon 7. Nov 10:43	1.433
Deploying of Source.				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 10:43	Mon 7. Nov 11:15	0.533
Ramping up the Source				
Source	DT_SC	Mon 7. Nov 11:15	Mon 7. Nov 12:27	1.200
Element Maintenance on Sub-Array 1				
Cable Reconfig	SB_REC_CR	Mon 7. Nov 12:27	Mon 7. Nov 12:42	0.250
Transiting in to First Shot Point.				
Production Prime	AC_PP	Mon 7. Nov 12:42	Mon 7. Nov 16:34	3.867
SOL Seq 8 MGL1610MCS16A FGSP=19932 Hdg=353.4° Prime EOL Seq 8 MGL1610MCS16A LGSP=20192 Incomplete				
Cetacean	DT_CT	Mon 7. Nov 16:34	Mon 7. Nov 17:06	0.533
NTBP Seq 8 MCS16A FSP=20193 LSP=20226				
Production Prime	AC_PP	Mon 7. Nov 17:06	Mon 7. Nov 19:08	2.033
SOL Seq 8 MGL1610MCS16A FGSP=20227 Hdg=353.4° Prime EOL Seq 8 MGL1610MCS16A LGSP=20358 Incomplete				
Cetacean	DT_CT	Mon 7. Nov 19:08	Mon 7. Nov 19:11	0.050
NTBP Seq 8 MCS16A FSP=20359 LSP=20363				
Production Prime	AC_PP	Mon 7. Nov 19:11	Mon 7. Nov 21:56	2.750
SOL Seq 8 MGL1610MCS16A FGSP=20364 Hdg=353.4° Prime EOL Seq 8 MGL1610MCS16A LGSP=20546 Incomplete				
Cetacean	DT_CT	Mon 7. Nov 21:56	Mon 7. Nov 22:19	0.383
NTBP Seq 8 MCS16A FSP=20547 LSP=20571				
Production Prime	AC_PP	Mon 7. Nov 22:19	Mon 7. Nov 24:00	1.683
SOL Seq 8 MGL1610MCS16A FGSP=20572 Hdg=353.4° Prime MSP Seq 8 MGL1610MCS16A LGSP=20686 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

7-Nov	Hours	% Percent
Acquisition	10.333	43.056
Production Prime	10.333	43.056
Chargeable Standby	11.500	47.917
Reconfiguration	8.583	35.764
Cable Reconfig	8.583	35.764
Transit	2.917	12.153
DownTime	2.167	9.028
Cetacean	0.967	4.028



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Page 2

7-Nov	Hours	% Percent
Source	1.200	5.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	28.893
Cetacean	1.033	0.253
Field Operations	21.667	5.310
Reconfiguration	8.883	2.177
Cable Reconfig	8.883	2.177
Transit	86.300	21.152
DownTime	8.617	2.112
Cetacean	5.733	1.405
Recording	1.683	0.413
Source	1.200	0.294
Mobilisation	86.700	21.250
Deployment	31.817	7.798
Mob Ashore	43.350	10.625
Testing	6.000	1.471
Transit to Prospect	5.533	1.356
Acquisition	180.383	44.212
Prime Line Change	9.417	2.308
Production Prime	170.967	41.904
Demobilisation	14.417	3.533
Recovery	14.417	3.533
Total	408.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 07 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Need to test Magnetometer (S/N: 882402) to confirm erratic readings.

Miscellaneous:

No Major Issues to Report



11/7/2016

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Daily Comment Summaries - Personnel Onboard

Mon 07 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
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Karla Rios RPS PSO
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Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Mon 7 Nov	Marcus G Langseth	8	85.95
Total Production:			85.95

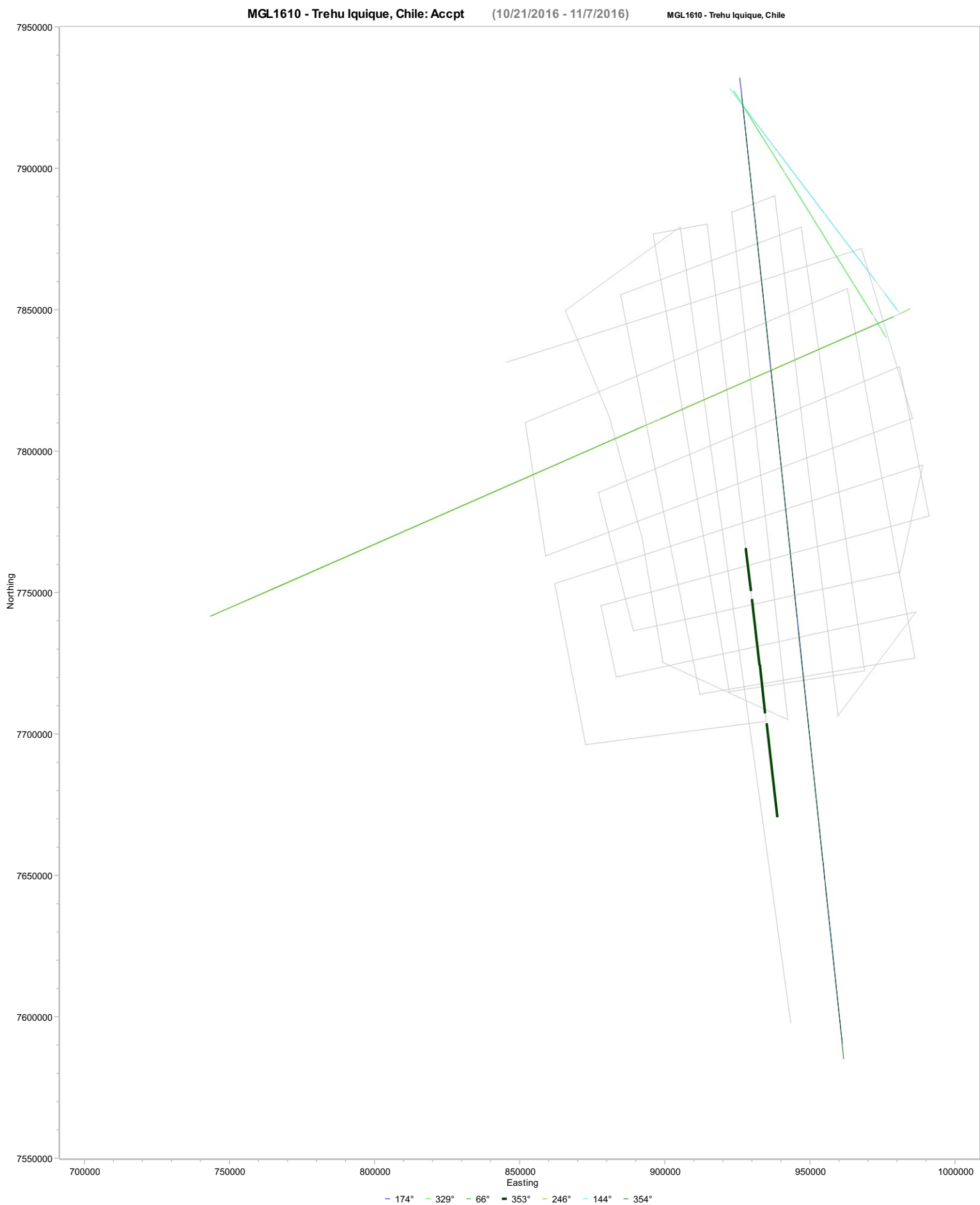
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	85.95	85.95	965.23	1398.58
Infill	0.00	0.00	0.00	0.00
Combined	85.95	85.95	965.23	1398.58
Total				
Prime	85.95	85.95	965.23	1398.58
Infill	0.00	0.00	0.00	0.00
Combined	85.95	85.95	965.23	1398.58



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Daily Science Report

11/8/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Tue 08 Nov

The Vessel stated the day in production on MCS16A. At 14:35 UTC the Vessel completed line MCS16A and made a line change to Line MCS15. Line MCS15 began at 17:04 and continued throughout the rest of the day. There was one Power-down for PSO sighting on Line MCS15.

Daily Comment Summaries - Plan for Tomorrow

Tue 08 Nov

The Vessel will start the day continuing production on Line MCS15. This is expected to continue until ~14:15 UTC at which time the vessel will make a line change to Line MCS11. It is expected to start this line at ~17:00 UTC and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 8. Nov 00:00	Tue 8. Nov 14:35	14.583
SOL Seq 8 MGL1610MCS16A FGSP=20686 Hdg=353.4° Prime EOL Seq 8 MGL1610MCS16A LGSP=21645 EOL Water Depth=2098m				
Prime Line Change	AC_PLC	Tue 8. Nov 14:35	Tue 8. Nov 17:04	2.483
Nominal Prime line change.				
Production Prime	AC_PP	Tue 8. Nov 17:04	Tue 8. Nov 20:28	3.400
SOL Seq 9 MGL1610MCS15 FGSP=22142 Hdg=170.8° Prime EOL Seq 9 MGL1610MCS15 LGSP=22364 Incomplete SOL Water Depth=2663m				
Cetacean	DT_CT	Tue 8. Nov 20:28	Tue 8. Nov 20:30	0.033
NTBP Seq 9 MCS15 FSP: 22364 LSP=22366				
Production Prime	AC_PP	Tue 8. Nov 20:30	Tue 8. Nov 24:00	3.500
SOL Seq 9 MGL1610MCS15 FGSP=22367 Hdg=170.8° Prime MSP Seq 9 MGL1610MCS15 LGSP=22596 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

8-Nov	Hours	% Percent
Acquisition	23.967	99.861
Prime Line Change	2.483	10.347
Production Prime	21.483	89.514
DownTime	0.033	0.139
Cetacean	0.033	0.139
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	27.288
Cetacean	1.033	0.239
Field Operations	21.667	5.015
Reconfiguration	8.883	2.056
Cable Reconfig	8.883	2.056
Transit	86.300	19.977
DownTime	8.650	2.002
Cetacean	5.767	1.335
Recording	1.683	0.390
Source	1.200	0.278
Mobilisation	86.700	20.069
Deployment	31.817	7.365
Mob Ashore	43.350	10.035
Testing	6.000	1.389
Transit to Prospect	5.533	1.281
Acquisition	204.350	47.303
Prime Line Change	11.900	2.755
Production Prime	192.450	44.549
Demobilisation	14.417	3.337



Daily Science Report

11/8/2016

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Category	Hours	% Percent
Recovery	14.417	3.337
Total	432.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 08 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Tue 08 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
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Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Husni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Tue 8 Nov	Marcus G Langseth	8 - 9	176.28
Total Production:			176.28

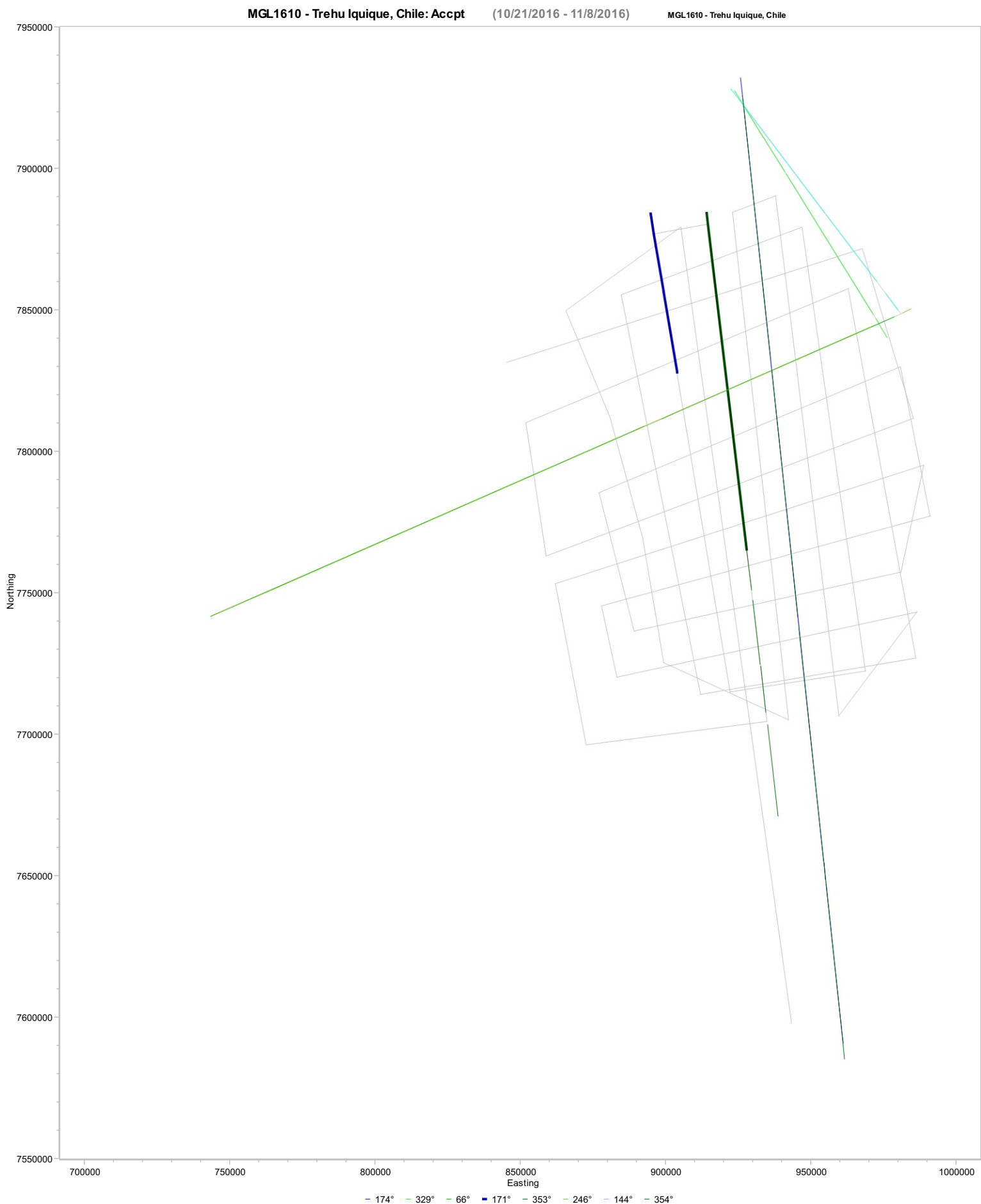
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	176.28	262.23	1141.50	1574.85
Infill	0.00	0.00	0.00	0.00
Combined	176.28	262.23	1141.50	1574.85
Total				
Prime	176.28	262.23	1141.50	1574.85
Infill	0.00	0.00	0.00	0.00
Combined	176.28	262.23	1141.50	1574.85



11/8/2016

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Daily Science Report

11/9/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Wed 09 Nov

The Vessel the day continuing production on Line MCS15. This continued until 14:18 UTC at which time the vessel will make a line change to Line MCS11. Line MCS11 began at 16:11 UTC and continue throughout the rest of the day.

There was a two power-downs during the day for PSO Sightings.

Daily Comment Summaries - Plan for Tomorrow

Wed 09 Nov

The Vessel will start the day continuing production on Line MCS11. This is expected to continue until ~10:53 UTC at which time the vessel will make a line change to Line MCS12. It is expected to start this line at ~13:53 UTC and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 9. Nov 00:00	Wed 9. Nov 13:21	13.350
SOL Seq 9 MGL1610MCS15 FGSP=22597 Hdg=170.8° Prime EOL Seq 9 MGL1610MCS15 LGSP=23480 Incomplete				
Cetacean	DT_CT	Wed 9. Nov 13:21	Wed 9. Nov 13:27	0.100
NTBP Seq 9 MCS15 FSP=23481 LSP=23486				
Production Prime	AC_PP	Wed 9. Nov 13:27	Wed 9. Nov 14:18	0.850
SOL Seq 9 MGL1610MCS15 FGSP=23487 Hdg=170.8° Prime EOL Seq 9 MGL1610MCS15 LGSP=23542 Complete EOL Water Depth=3461m				
Prime Line Change	AC_PLC	Wed 9. Nov 14:18	Wed 9. Nov 16:11	1.883
Nominal Prime line change.				
Production Prime	AC_PP	Wed 9. Nov 16:11	Wed 9. Nov 17:41	1.500
SOL Seq 10 MGL1610MCS11 FGSP=23936 Hdg=349.1° Prime EOL Seq 10 MGL1610MCS11 LGSP=240331 Incomplete SOL Water Depth=4411m				
Cetacean	DT_CT	Wed 9. Nov 17:41	Wed 9. Nov 17:51	0.167
NTBP Seq 10 MCS11 FSP=24034 LSP=24044				
Production Prime	AC_PP	Wed 9. Nov 17:51	Wed 9. Nov 24:00	6.150
SOL Seq 10 MGL1610MCS11 FGSP=240451 Hdg=349.1° Prime MSP Seq 10 MGL1610MCS11 LGSP=24453 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

9-Nov	Hours	% Percent
Acquisition	23.733	98.889
Prime Line Change	1.883	7.847
Production Prime	21.850	91.042
DownTime	0.267	1.111
Cetacean	0.267	1.111
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	25.852
Cetacean	1.033	0.227
Field Operations	21.667	4.751
Reconfiguration	8.883	1.948
Cable Reconfig	8.883	1.948
Transit	86.300	18.925
DownTime	8.917	1.955
Cetacean	6.033	1.323
Recording	1.683	0.369
Source	1.200	0.263
Mobilisation	86.700	19.013
Deployment	31.817	6.977
Mob Ashore	43.350	9.507
Testing	6.000	1.316



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Category	Hours	% Percent
Transit to Prospect	5.533	1.213
Acquisition	228.083	50.018
Prime Line Change	13.783	3.023
Production Prime	214.300	46.996
Demobilisation	14.417	3.162
Recovery	14.417	3.162
Total	456.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 09 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 09 Nov

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Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Husni - Alhisi GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



11/9/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	8	0	0

Percentages Charged

Prime	35.97% of 4879.55 km (Sail Line)
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Average Daily Production

Average Accepted Daily Production	150.99 km
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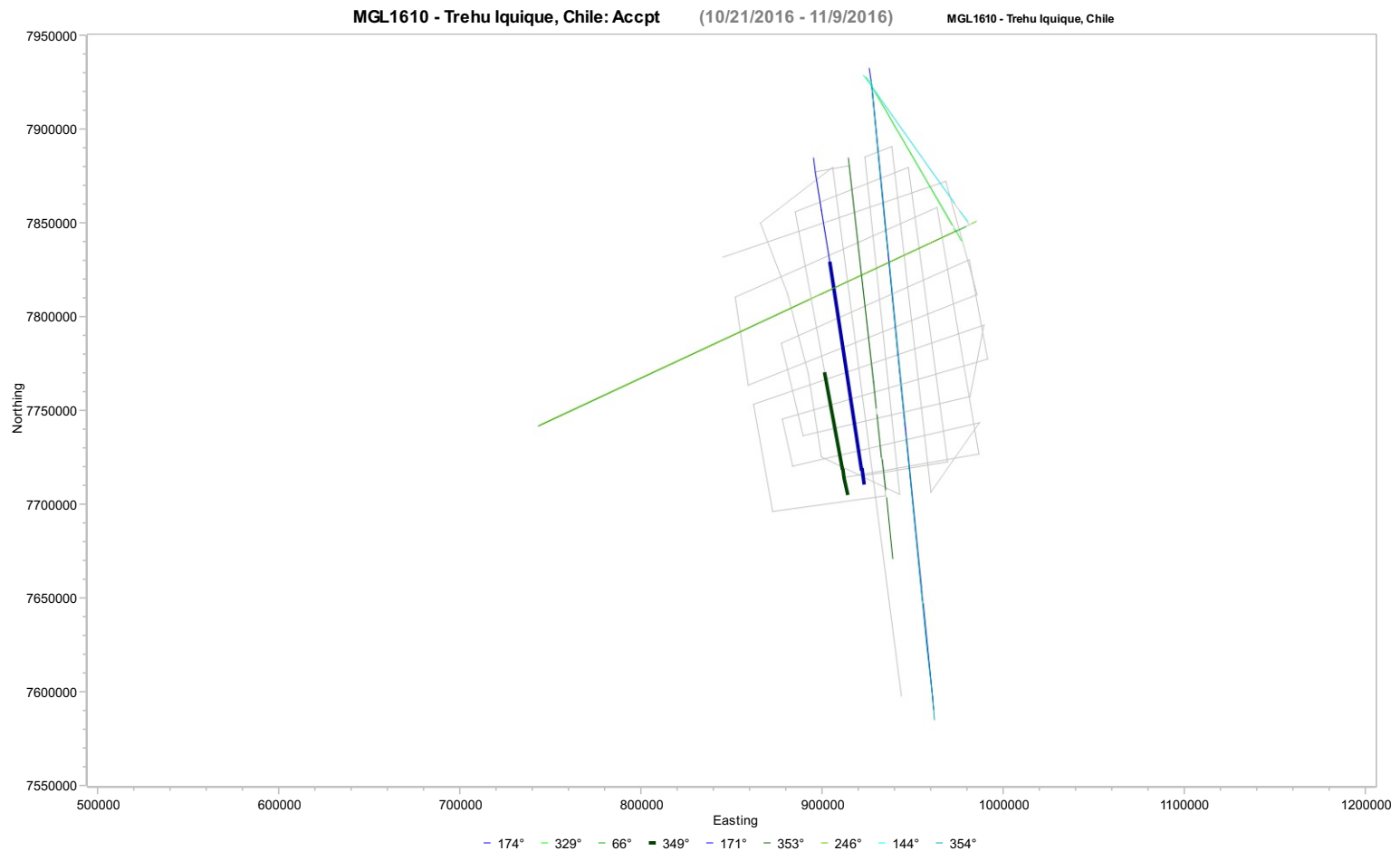
Average Charged Daily Production	146.28 km
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Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Wed 9 Nov	Marcus G Langseth	9 - 10	180.55
Total Production:			180.55

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	180.55	442.77	1322.05	1755.40
Infill	0.00	0.00	0.00	0.00
Combined	180.55	442.77	1322.05	1755.40
Total				
Prime	180.55	442.77	1322.05	1755.40
Infill	0.00	0.00	0.00	0.00
Combined	180.55	442.77	1322.05	1755.40





Daily Science Report

11/10/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Thu 10 Nov

The Vessel started the day in Production on Line MCS11, which concluded at 11:19 UTC. The vessel made a normal line change to Line MCS12 which started at 14:01 UTC and continued until 23:28 UTC. At the end of the day the vessel was on Line Change to Line MCS13.

Daily Comment Summaries - Plan for Tomorrow

Thu 10 Nov

The Vessel will start the day on a line change between Line MCS12 and MCS13. Line MCS13 is expected to start at ~01:20 UTC and continue until ~22:20 UTC. The vessel will make a line change to Line MCS17 and is expect to be in production on it at the end of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Thu 10. Nov 00:00	Thu 10. Nov 11:19	11.317
SOL Seq 10 MGL1610MCS11 FGSP=3262 FCSP=3262 Hdg=349.1° Prime EOL Seq 10 MGL1610MCS11 LGSP=7001 LCSP=7001 Complete EOL Water Depth=3841m				
Prime Line Change	AC_PLC	Thu 10. Nov 11:19	Thu 10. Nov 14:01	2.700
Nominal Prime line change.				
Production Prime	AC_PP	Thu 10. Nov 14:01	Thu 10. Nov 15:23	1.367
SOL Seq 11 MGL1610MCS12 FGSP= 25957 Hdg=69.2° Prime EOL Seq 11 MGL1610MCS12 LGSP=26047 Incomplete SOL Water Depth=5354m				
Cetacean	DT_CT	Thu 10. Nov 15:23	Thu 10. Nov 15:31	0.133
NTBP Seq 11 MCS12 FSP=26048 LSP=26054				
Production Prime	AC_PP	Thu 10. Nov 15:31	Thu 10. Nov 15:49	0.300
SOL Seq 11 MGL1610MCS12 FGSP=26055 Hdg=69.2° Prime EOL Seq 11 MGL1610MCS12 LGSP=26076 Incomplete				
Cetacean	DT_CT	Thu 10. Nov 15:49	Thu 10. Nov 15:56	0.117
NTBP Seq 11 MCS12 FSP=26077 LSP=25082				
Production Prime	AC_PP	Thu 10. Nov 15:56	Thu 10. Nov 23:38	7.700
SOL Seq 11 MGL1610MCS12 FGSP=26083 Hdg=69.2° Prime EOL Seq 11 MGL1610MCS12 LGSP=26584 Complete EOL Water Depth=1400m				
Prime Line Change	AC_PLC	Thu 10. Nov 23:38	Thu 10. Nov 24:00	0.367
Nominal Prime line change.				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

10-Nov	Hours	% Percent
Acquisition	23.750	98.958
Prime Line Change	3.067	12.778
Production Prime	20.683	86.181
DownTime	0.250	1.042
Cetacean	0.250	1.042
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	24.559
Cetacean	1.033	0.215
Field Operations	21.667	4.514
Reconfiguration	8.883	1.851
Cable Reconfig	8.883	1.851
Transit	86.300	17.979
DownTime	9.167	1.910
Cetacean	6.283	1.309
Recording	1.683	0.351
Source	1.200	0.250



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Category	Hours	% Percent
Mobilisation	86.700	18.062
Deployment	31.817	6.628
Mob Ashore	43.350	9.031
Testing	6.000	1.250
Transit to Prospect	5.533	1.153
Acquisition	251.833	52.465
Prime Line Change	16.850	3.510
Production Prime	234.983	48.955
Demobilisation	14.417	3.003
Recovery	14.417	3.003
Total	480.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 10 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Thu 10 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

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Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



11/10/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



39%

Prime Lines Completed



24%

Preplot Lines	Complete	Incomplete	Pending
41	10	0	0

Percentages Charged

Prime	39.46% of 4879.55 km (Sail Line)
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Average Daily Production

Average Accepted Daily Production	152.45 km
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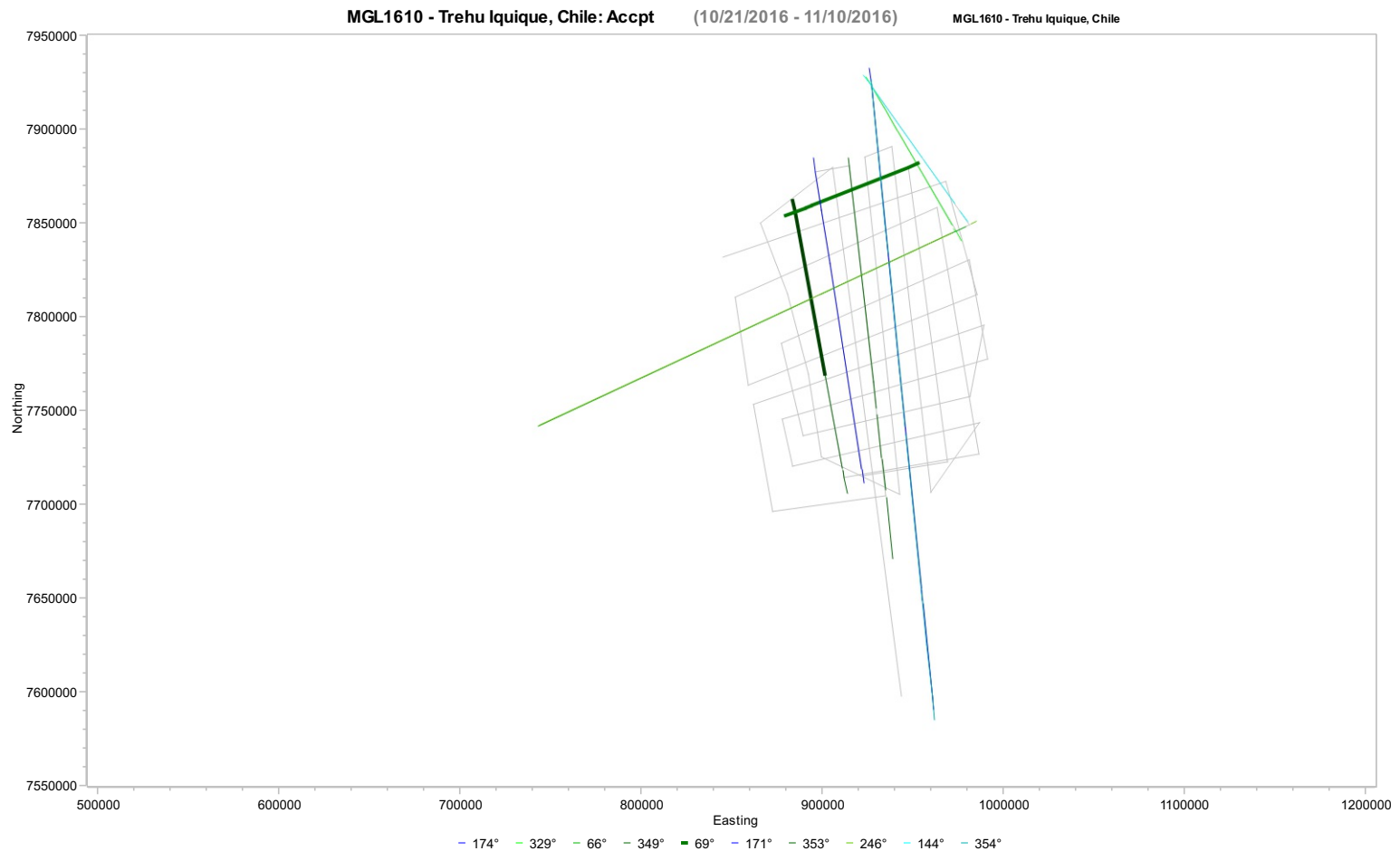
Average Charged Daily Production	148.11 km
----------------------------------	-----------

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Thu 10 Nov	Marcus G Langseth	10 - 11	170.05
Total Production:			170.05

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	170.05	612.83	1492.10	1925.45
Infill	0.00	0.00	0.00	0.00
Combined	170.05	612.83	1492.10	1925.45
Total				
Prime	170.05	612.83	1492.10	1925.45
Infill	0.00	0.00	0.00	0.00
Combined	170.05	612.83	1492.10	1925.45





Daily Science Report

11/11/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Fri 11 Nov

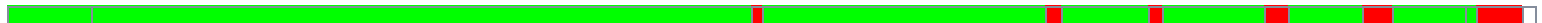
The Vessel started the day in Production on Line MCS13, which concluded at 23:04 UTC. The vessel made a normal line change to Line MCS17 which started at 23:15 UTC and continue throughout the rest of the day. There was a number of Power-downs on Line MCS13 for PSO Sightings.

Daily Comment Summaries - Plan for Tomorrow

Fri 11 Nov

The Vessel will start the day on MCS17. Line MCS17 is expected to start at ~01:20 UTC and continue until ~11:57 UTC. The vessel will then make a line change to Line MCS18 and then on to line MCS17, which will continue through out the end of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Prime Line Change	AC_PLC	Fri 11. Nov 00:00	Fri 11. Nov 01:20	1.333
Nominal Prime line change.				
Production Prime	AC_PP	Fri 11. Nov 01:20	Fri 11. Nov 11:42	10.367
SOL Seq 12 MGL1610MCS13 FGSP=26938 Hdg=172.1° Prime EOL Seq 12 MGL1610MCS13 LGSP=27623 Incomplete SOL Water Depth=1470m				
Cetacean	DT_CT	Fri 11. Nov 11:42	Fri 11. Nov 11:54	0.200
NTBP Seq 12 MCS13 FSP=27624 LSP=27635				
Production Prime	AC_PP	Fri 11. Nov 11:54	Fri 11. Nov 16:22	4.467
SOL Seq 12 MGL1610MCS13 FGSP=27636 Hdg=172.1° Prime EOL Seq 12 MGL1610MCS13 LGSP=27924 Incomplete				
Cetacean	DT_CT	Fri 11. Nov 16:22	Fri 11. Nov 16:38	0.267
NTBP Seq 12 MCS13 FSP=27925 LSP=27940				
Production Prime	AC_PP	Fri 11. Nov 16:38	Fri 11. Nov 18:00	1.367
SOL Seq 12 MGL1610MCS13 FGSP=27941 Hdg=172.1° Prime EOL Seq 12 MGL1610MCS13 LGSP=28031 Incomplete				
Cetacean	DT_CT	Fri 11. Nov 18:00	Fri 11. Nov 18:14	0.233
NTBP Seq 12 MCS13 FSP=28032 LSP=28045				
Production Prime	AC_PP	Fri 11. Nov 18:14	Fri 11. Nov 19:52	1.633
SOL Seq 12 MGL1610MCS13 FGSP=28046 Hdg=172.1° Prime EOL Seq 12 MGL1610MCS13 LGSP=28155 Incomplete				
Cetacean	DT_CT	Fri 11. Nov 19:52	Fri 11. Nov 20:15	0.383
NTBP Seq 12 MCS13 FSP=28156 LSP=28180				
Production Prime	AC_PP	Fri 11. Nov 20:15	Fri 11. Nov 21:25	1.167
SOL Seq 12 MGL1610MCS13 FGSP=18181 Hdg=172.1° Prime EOL Seq 12 MGL1610MCS13 LGSP=28257 Incomplete				
Cetacean	DT_CT	Fri 11. Nov 21:25	Fri 11. Nov 21:55	0.500
NTBP Seq 12 MCS13 FSP=28258 LSP=28290				
Production Prime	AC_PP	Fri 11. Nov 21:55	Fri 11. Nov 23:04	1.150
SOL Seq 12 MGL1610MCS13 FGSP=28291 Hdg=172.1° Prime EOL Seq 12 MGL1610MCS13 LGSP=28364 Complete EOL Water Depth=390m				
Prime Line Change	AC_PLC	Fri 11. Nov 23:04	Fri 11. Nov 23:15	0.183
Nominal Prime line change.				
Recording	DT_RC	Fri 11. Nov 23:15	Fri 11. Nov 24:00	0.750
NTBP Seq 13 MCS17 FSP=28730 LSP=28777 Testing of Source Controller Output of SEG-Y				



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Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

11-Nov	Hours	% Percent
Acquisition	21.667	90.278
Prime Line Change	1.517	6.319
Production Prime	20.150	83.958
DownTime	2.333	9.722
Cetacean	1.583	6.597
Recording	0.750	3.125
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	23.390
Cetacean	1.033	0.205
Field Operations	21.667	4.299
Reconfiguration	8.883	1.763
Cable Reconfig	8.883	1.763
Transit	86.300	17.123
DownTime	11.500	2.282
Cetacean	7.867	1.561
Recording	2.433	0.483
Source	1.200	0.238
Mobilisation	86.700	17.202
Deployment	31.817	6.313
Mob Ashore	43.350	8.601
Testing	6.000	1.190
Transit to Prospect	5.533	1.098
Acquisition	273.500	54.266
Prime Line Change	18.367	3.644
Production Prime	255.133	50.622
Demobilisation	14.417	2.860
Recovery	14.417	2.860
Total	504.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 11 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report



11/11/2016

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Daily Comment Summaries - Personnel Onboard

Fri 11 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin L DEO OMO Marine Technician - Acq/IT
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Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisi GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	11	1	0

Percentages Charged	
Prime	42.85% of 4879.55 km (Sail Line)

Average Daily Production	
Average Accepted Daily Production	153.37 km
Average Charged Daily Production	149.34 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Fri 11 Nov	Marcus G Langseth	12	165.25
Total Production:			165.25

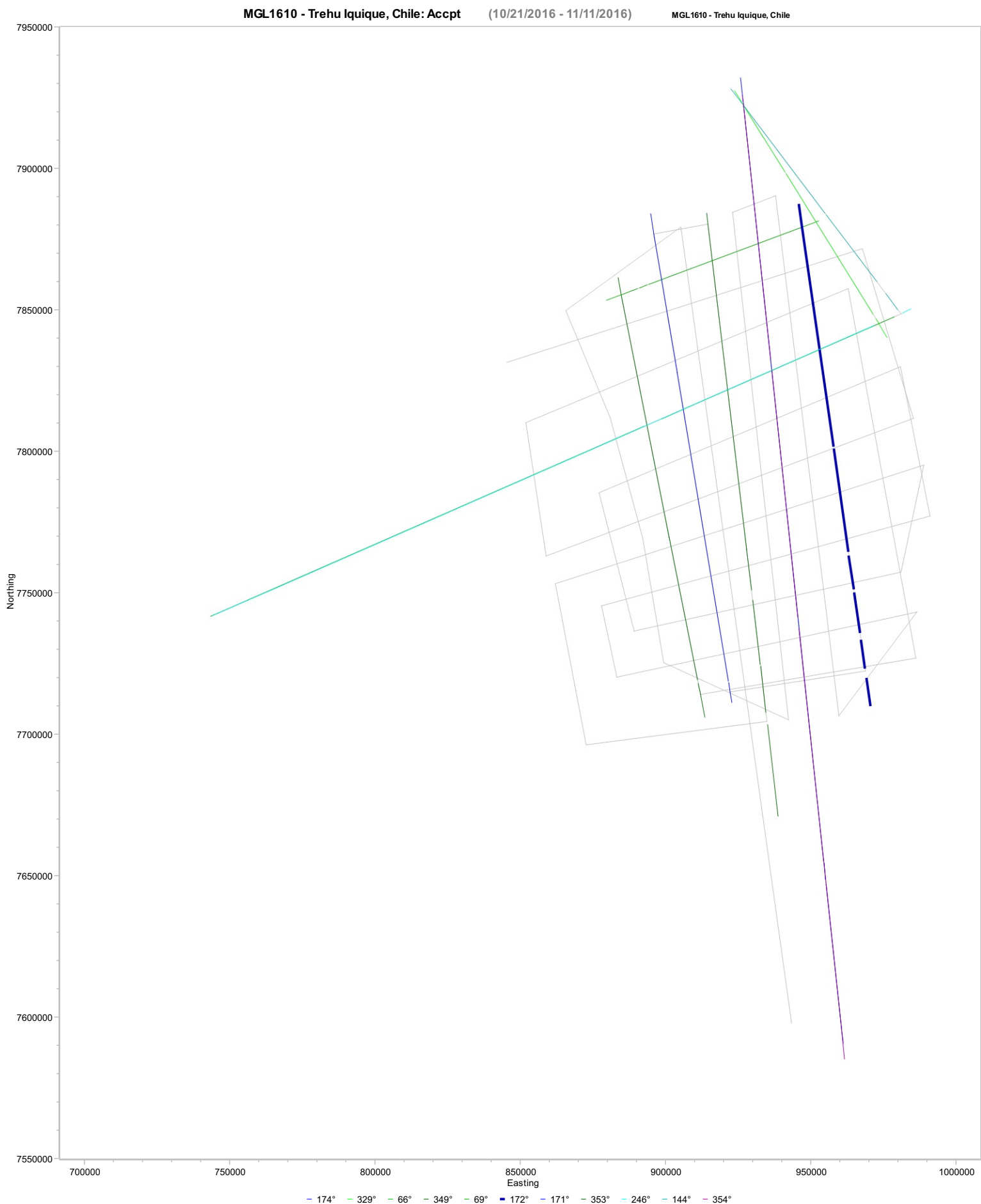
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	165.25	778.08	1657.35	2090.70
Infill	0.00	0.00	0.00	0.00
Combined	165.25	778.08	1657.35	2090.70
Total				
Prime	165.25	778.08	1657.35	2090.70
Infill	0.00	0.00	0.00	0.00
Combined	165.25	778.08	1657.35	2090.70



11/11/2016

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Daily Science Report

11/12/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus / David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sat 12 Nov

The Vessel started the day on MCS17. Line MCS17 continued until 11:57 UTC. The vessel then make a line change to Line MCS18, which started at 14:25 UTC. At 21:58 UTC Line MCS18 ended and the vessel made a short line change to MCS07, which started at 22:08 and continued through out the end of the day.

Daily Comment Summaries - Plan for Tomorrow

Sat 12 Nov

The vessel will start the day on Line MCS07, which is expected to end around 05:56 UTC. The Vessel will make a line change to MCS22, which is expected to end at ~22:25. At that time the vessel will make a short line change to Line MCS10 and should remain in production through the rest of the day.

Just before the end of MCS07 - Sub-arrays 1 & 2 will be picked up to preform maintenance during the line change.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Recording	DT_RC	Sat 12. Nov 00:00	Sat 12. Nov 00:10	0.167
NTBP Seq 13 MCS17 FSP=28778 LSP=28788				
Testing of Source Controller Output of SEG-Y				
Production Prime	AC_PP	Sat 12. Nov 00:10	Sat 12. Nov 11:57	11.783
SOL Seq 13 MGL1610MCS17 FGSP=28789 Hdg=262.4° Prime EOL Seq 13 MGL1610MCS17 LGSP=29556 Complete				
SOL Water Depth=780m				
EOL Water Depth=5407m				
Prime Line Change	AC_PLC	Sat 12. Nov 11:57	Sat 12. Nov 14:25	2.467
Nominal Prime line change.				
Production Prime	AC_PP	Sat 12. Nov 14:25	Sat 12. Nov 21:58	7.550
SOL Seq 14 MGL1610MCS18 FGSP=29972 Hdg=349.6° Prime EOL Seq 14 MGL1610MCS18 LGSP=30460 Complete				
SOL Water Depth=6102m				
EOL Water Depth=5845m				
Prime Line Change	AC_PLC	Sat 12. Nov 21:58	Sat 12. Nov 22:08	0.167
Nominal Prime line change.				
Production Prime	AC_PP	Sat 12. Nov 22:08	Sat 12. Nov 24:00	1.867
SOL Seq 15 MGL1610MCS07 FGSP=30935 Hdg=351.5° Prime MSP Seq 15 MGL1610MCS07 LGSP=31057 Midnight				
SOL Water Depth=5682m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

12-Nov	Hours	% Percent
Acquisition	23.833	99.306
Prime Line Change	2.633	10.972
Production Prime	21.200	88.333
DownTime	0.167	0.694
Recording	0.167	0.694
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	22.326
Cetacean	1.033	0.196
Field Operations	21.667	4.104
Reconfiguration	8.883	1.682
Cable Reconfig	8.883	1.682
Transit	86.300	16.345
DownTime	11.667	2.210
Cetacean	7.867	1.490



11/12/2016

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Category	Hours	% Percent
Recording	2.600	0.492
Source	1.200	0.227
Mobilisation	86.700	16.420
Deployment	31.817	6.026
Mob Ashore	43.350	8.210
Testing	6.000	1.136
Transit to Prospect	5.533	1.048
Acquisition	297.333	56.313
Prime Line Change	21.000	3.977
Production Prime	276.333	52.336
Demobilisation	14.417	2.730
Recovery	14.417	2.730
Total	528.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 12 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

S1G1 - Stopped shooting and needs to be recovered to effect repairs.

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sat 12 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
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Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisi GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



11/12/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



47%

Prime Lines Completed



32%

Preplot Lines	Complete	Incomplete	Pending
41	13	1	0

Percentages Charged	
Prime	46.68% of 4879.55 km (Sail Line)

Average Daily Production	
Average Accepted Daily Production	155.63 km
Average Charged Daily Production	151.86 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sat 12 Nov	Marcus G Langseth	13 - 15	187.23
Total Production:			187.23

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	187.23	965.30	1844.58	2277.93
Infill	0.00	0.00	0.00	0.00
Combined	187.23	965.30	1844.58	2277.93
Total				
Prime	187.23	965.30	1844.58	2277.93
Infill	0.00	0.00	0.00	0.00
Combined	187.23	965.30	1844.58	2277.93





Daily Science Report

11/13/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sun 13 Nov

The Vessel stated the day in production on Line MCS07, which concluded at 05:56 UTC. The Vessel made a line change to Line MCS22 which continued until ~21:44 and the vessel made another line change to Line MCS10. The vessel continued in production throughout the rest of the day on Line MCS10.

At the end of MCS07 Source Sub-Arrays 1 & 2 were recovered for maintenance as S1G1 had failed. The work continued throughout most of the line change. The Sub-Arrays were re-deployed before the start of Line MCS22, however shortly after the start of the line S1G1 started Auto-Firing and had to be recovered. This delayed the FGSP of the line.

Daily Comment Summaries - Plan for Tomorrow

Sun 13 Nov

The Vessel will start the day in Production on Line MCS10., which will continue to ~10:05 at which time the vessel will make a line change to MCS09. During this Line change Source Sub-Arrays 3 and 4 will be recovered for maintenance. Once started Line MCS09 is expected to continue throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 13. Nov 00:00	Sun 13. Nov 04:55	4.917
SOL Seq 15 MGL1610MCS07 FGSP=31058 Hdg=351.5° Prime EOL Seq 15 MGL1610MCS07 LGSP=21383 Complete				
Source	DT_SC	Sun 13. Nov 04:55	Sun 13. Nov 05:56	1.017
Seq 15 MCS07 FSP=31384 LSP=31447 Performing Maintenance on Sub-Arrays 1 & 2				
Prime Line Change	AC_PLC	Sun 13. Nov 05:56	Sun 13. Nov 08:16	2.333
Nominal Prime line change. - Working On Sub-Arrays 1 & 2				
Source	DT_SC	Sun 13. Nov 08:16	Sun 13. Nov 09:28	1.200
NTBP Seq 16 MCS22 FSP=31948 LSP=32015 Source Element 1 on Sub-Array 1 - Autofiring - Recovered and repaired.				
Production Prime	AC_PP	Sun 13. Nov 09:28	Sun 13. Nov 21:44	12.267
SOL Seq 16 MGL1610MCS22 FGSP=32016 Hdg=166.3° Prime EOL Seq 16 MGL1610MCS22 LGSP=32818 Complete SOL Water Depth=7115m EOL Water Depth=7178m				
Prime Line Change	AC_PLC	Sun 13. Nov 21:44	Sun 13. Nov 21:53	0.150
Nominal Prime line change.				
Production Prime	AC_PP	Sun 13. Nov 21:53	Sun 13. Nov 24:00	2.117
SOL Seq 17 MGL1610MCS10 FGSP=32844 Hdg=80.2° Prime MSP Seq 17 MGL1610MCS10 LGSP=32985 Midnight SOL Water Depth=7225m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

13-Nov	Hours	% Percent
Acquisition	21.783	90.764
Prime Line Change	2.483	10.347
Production Prime	19.300	80.417
DownTime	2.217	9.236
Source	2.217	9.236
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	21.356
Cetacean	1.033	0.187
Field Operations	21.667	3.925
Reconfiguration	8.883	1.609
Cable Reconfig	8.883	1.609



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Category	Hours	% Percent
Transit	86.300	15.634
DownTime	13.883	2.515
Cetacean	7.867	1.425
Recording	2.600	0.471
Source	3.417	0.619
Mobilisation	86.700	15.707
Deployment	31.817	5.764
Mob Ashore	43.350	7.853
Testing	6.000	1.087
Transit to Prospect	5.533	1.002
Acquisition	319.117	57.811
Prime Line Change	23.483	4.254
Production Prime	295.633	53.557
Demobilisation	14.417	2.612
Recovery	14.417	2.612
Total	552.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 13 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

S1G1 - During line MCS07 it Stopped shooting and needs to be recovered to effect repairs. Then again at the beginning of Line MCS22 S1G1 started auto firing and needed to be recovered again for repairs.

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 13 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guérin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Hemriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



Daily Science Report

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	15	1	0

Percentages Charged

Prime	49.93% of 4879.55 km (Sail Line)
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Average Daily Production

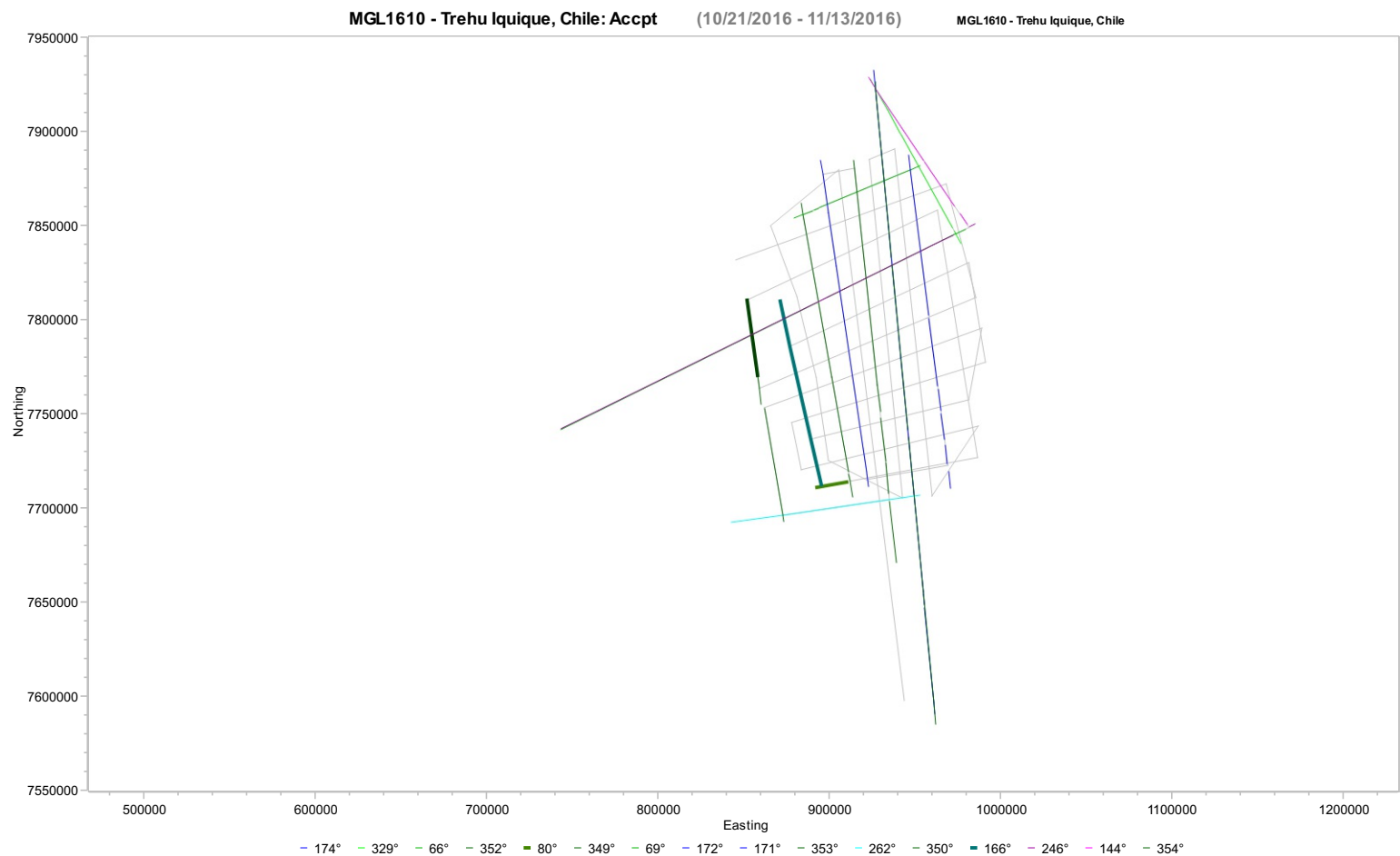
Average Accepted Daily Production	155.80 km
Average Charged Daily Production	152.28 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sun 13 Nov	Marcus G Langseth	15 - 17	158.50
Total Production:			158.50

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	158.50	1123.80	2003.08	2436.43
Infill	0.00	0.00	0.00	0.00
Combined	158.50	1123.80	2003.08	2436.43
Total				
Prime	158.50	1123.80	2003.08	2436.43
Infill	0.00	0.00	0.00	0.00
Combined	158.50	1123.80	2003.08	2436.43





Daily Science Report

11/14/2016

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Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Mon 14 Nov

The Vessel stated the day in production on Line MCS10, which concluded at 10:05 UTC. The Vessel made a line change to Line MCS09 which continued throughout the rest of the day on Line MCS10.

Daily Comment Summaries - Plan for Tomorrow

Mon 14 Nov

The Vessel will start the day in Production on Line MCS09, which is expected to conclude at ~05:50 UTC. The vessel will make a line change to Line MCS08, which is expected to continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Mon 14. Nov 00:00	Mon 14. Nov 10:05	10.083
SOL Seq 17 MGL1610MCS10 FGSP=32985 Hdg=80.2° Prime EOL Seq 17 MGL1610MCS10 LGSP=33639 Complete EOL Water Depth=133m				
Infill Line Change	AC_ILC	Mon 14. Nov 10:05	Mon 14. Nov 13:03	2.967
Nominal Infill line change.				
Production Prime	AC_PP	Mon 14. Nov 13:03	Mon 14. Nov 15:28	2.417
SOL Seq 18 MGL1610MCS09 FGSP=33999 Hdg=349.8° Prime EOL Seq 18 MGL1610MCS09 LGSP=34154 Incomplete SOL Water Depth=359m				
Cetacean	DT_CT	Mon 14. Nov 15:28	Mon 14. Nov 15:34	0.100
NTBP Seq 18 MCS09 FSP=34155 LSP=34160				
Production Prime	AC_PP	Mon 14. Nov 15:34	Mon 14. Nov 24:00	8.433
SOL Seq 18 MGL1610MCS09 FGSP=34161 Hdg=349.8° Prime MSP Seq 18 MGL1610MCS09 LGSP=34716 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

14-Nov	Hours	% Percent
Acquisition	23.900	99.583
Infill Line Change	2.967	12.361
Production Prime	20.933	87.222
DownTime	0.100	0.417
Cetacean	0.100	0.417
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	20.466
Cetacean	1.033	0.179
Field Operations	21.667	3.762
Reconfiguration	8.883	1.542
Cable Reconfig	8.883	1.542
Transit	86.300	14.983
DownTime	13.983	2.428
Cetacean	7.967	1.383
Recording	2.600	0.451
Source	3.417	0.593
Mobilisation	86.700	15.052
Deployment	31.817	5.524
Mob Ashore	43.350	7.526
Testing	6.000	1.042
Transit to Prospect	5.533	0.961
Acquisition	343.017	59.552
Infill Line Change	2.967	0.515



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Category	Hours	% Percent
Prime Line Change	23.483	4.077
Production Prime	316.567	54.959
Demobilisation	14.417	2.503
Recovery	14.417	2.503
Total	576.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 14 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Mon 14 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guérin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	16	0	0

Percentages Charged

Prime	53.43% of 4879.55 km (Sail Line)
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Average Daily Production

Average Accepted Daily Production	156.67 km
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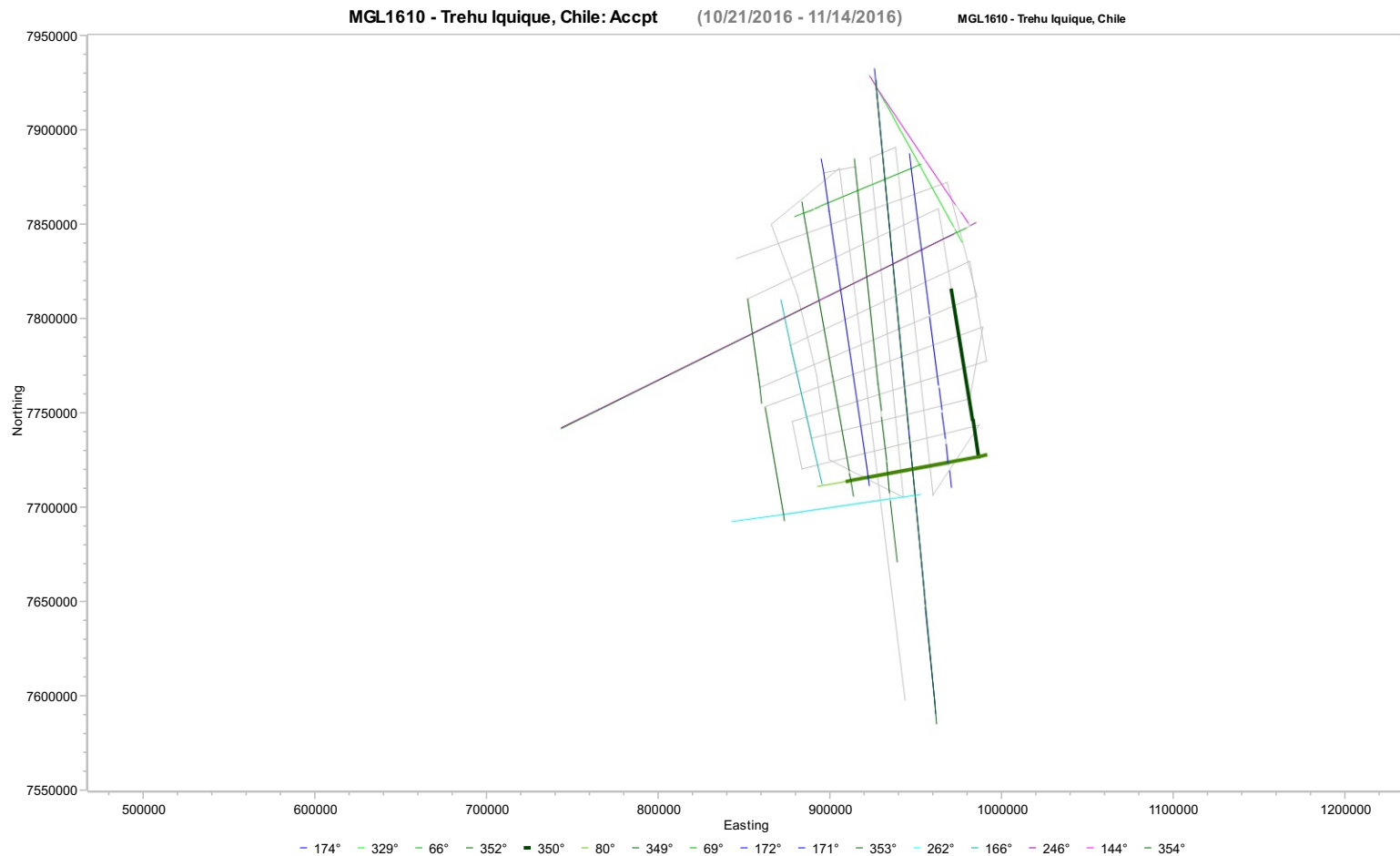
Average Charged Daily Production	153.35 km
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Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Mon 14 Nov	Marcus G Langseth	17 - 18	170.53
Total Production:			170.53

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	170.53	170.53	2173.60	2606.95
Infill	0.00	0.00	0.00	0.00
Combined	170.53	170.53	2173.60	2606.95
Total				
Prime	170.53	170.53	2173.60	2606.95
Infill	0.00	0.00	0.00	0.00
Combined	170.53	170.53	2173.60	2606.95





Daily Science Report

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Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Tue 15 Nov

The vessel started the day in production on line MCS09. This Line continued until 05:51 UTC at which time the vessel made a line change to Line MCS08, which started at 08:05 UTC. At 21:35 UTC the vessel saw a number of issues with different systems on-board the biggest of which caused the SEAL recording system to stop communicating with the PRM and PMCR. This resulted in no data being recorded and at 22:21 UTC the Decision was made to circle around on Line MCS08 to re-shoot the area the data was lost.

During time that we where having issues with SEAL Recording System, the EM122 locked up, the Weather System stopped communicating and there was a outage of the cNav3050. We are still investigation the cause of these issues, but it seems to all be related to a internal ships network hick up.

Daily Comment Summaries - Plan for Tomorrow

Tue 15 Nov

The Vessel started the day circling around on Line MCS08 to pickup the remainder of the line after recording system issues. Once Line MCS08A is completed the vessel will make a line change to Line MCS04 which should continue throughout the remainder of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 15. Nov 00:00	Tue 15. Nov 05:51	5.850
SOL Seq 18 MGL1610MCS09 FGSP=34716 Hdg=349.8° Prime EOL Seq 18 MGL1610MCS09 LGSP=35096 Complete EOL Water Depth=991m				
Prime Line Change	AC_PLC	Tue 15. Nov 05:51	Tue 15. Nov 08:05	2.233
Nominal Prime line change.				
Production Prime	AC_PP	Tue 15. Nov 08:05	Tue 15. Nov 10:26	2.350
SOL Seq 19 MGL1610MCS08 FGSP=35979 Hdg=246.9° Prime EOL Seq 19 MGL1610MCS08 LGSP=36134 Incomplete				
Cetacean	DT_CT	Tue 15. Nov 10:26	Tue 15. Nov 10:58	0.533
NTBP Seq 19 MCS08 FSP=36135 LSP=36164				
Production Prime	AC_PP	Tue 15. Nov 10:58	Tue 15. Nov 21:35	10.617
SOL Seq 19 MGL1610MCS08 FGSP=30165 Hdg=246.9° Prime EOL Seq 19 MGL1610MCS08 LGSP=36863 Incomplete Early EOL Due to Recording System Lockup.				
Recording	DT_RC	Tue 15. Nov 21:35	Tue 15. Nov 22:21	0.767
NTBP Seq 19 MCS08 FSP=36864 LSP=36909 No MCS data recorded due to System PMRC and PRM not communicating.				
Recording	DT_RC	Tue 15. Nov 22:21	Tue 15. Nov 24:00	1.650
Downtime due to recording systems. - Circling around to pickup re-shoot and remainder of LINE MCS08				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

15-Nov	Hours	% Percent
Acquisition	21.050	87.708
Prime Line Change	2.233	9.306
Production Prime	18.817	78.403
Downtime	2.950	12.292
Cetacean	0.533	2.222
Recording	2.417	10.069
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	19.647
Cetacean	1.033	0.172
Field Operations	21.667	3.611
Reconfiguration	8.883	1.481
Cable Reconfig	8.883	1.481
Transit	86.300	14.383
Downtime	16.933	2.822
Cetacean	8.500	1.417



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Category	Hours	% Percent
Recording	5.017	0.836
Source	3.417	0.569
Mobilisation	86.700	14.450
Deployment	31.817	5.303
Mob Ashore	43.350	7.225
Testing	6.000	1.000
Transit to Prospect	5.533	0.922
Acquisition	364.067	60.678
Infill Line Change	2.967	0.494
Prime Line Change	25.717	4.286
Production Prime	335.383	55.897
Demobilisation	14.417	2.403
Recovery	14.417	2.403
Total	600.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 15 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Tue 15 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guérin L DEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Hemriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech - Contractor

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Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
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Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



11/15/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	17	1	0

Percentages Charged

Prime	56.59% of 4879.55 km (Sail Line)
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Average Daily Production

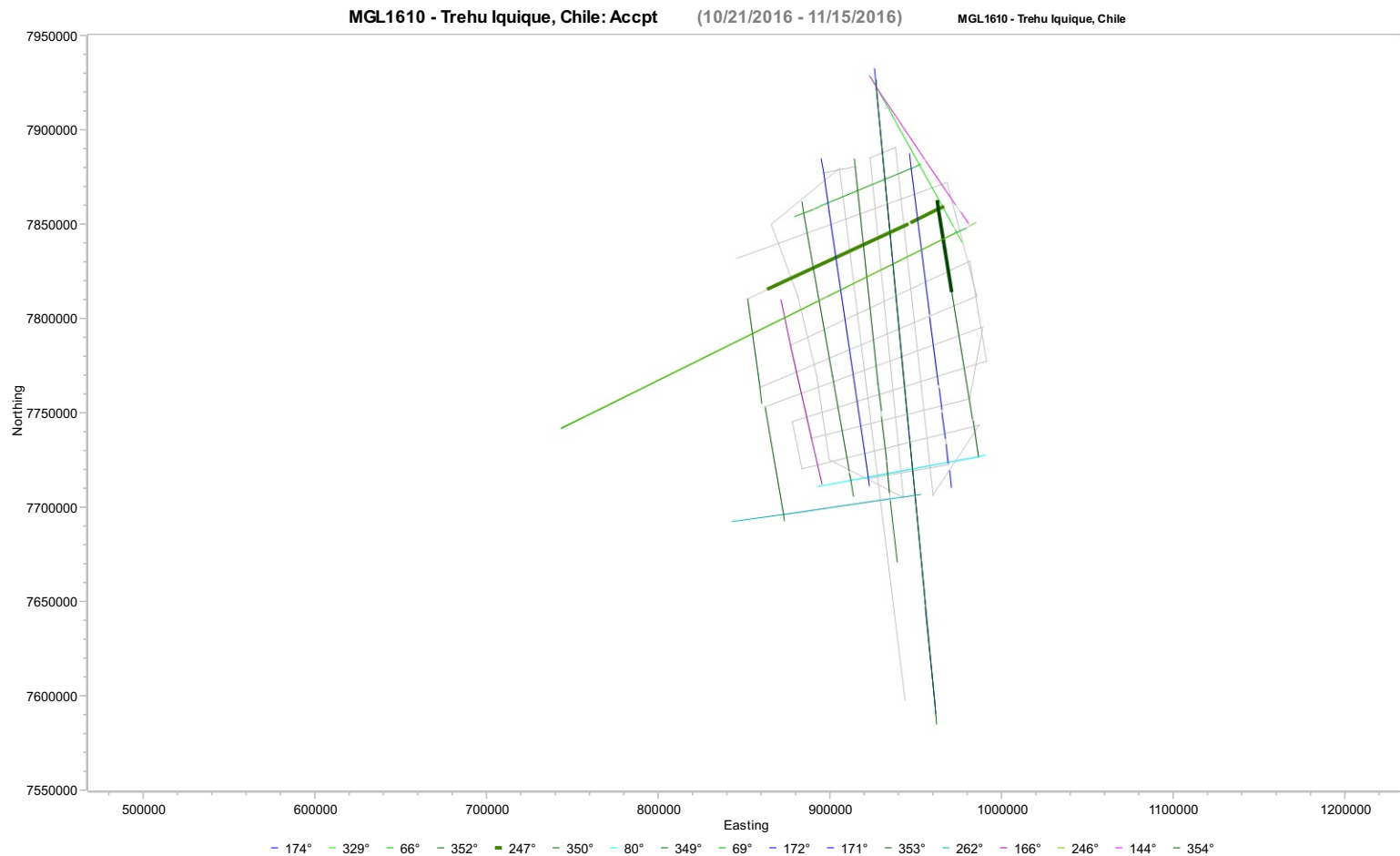
Average Accepted Daily Production	156.53 km
Average Charged Daily Production	153.40 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Tue 15 Nov	Marcus G Langseth	18 - 19	154.18
Total Production:			154.18

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	154.18	324.70	2327.78	2761.13
Infill	0.00	0.00	0.00	0.00
Combined	154.18	324.70	2327.78	2761.13
Total				
Prime	154.18	324.70	2327.78	2761.13
Infill	0.00	0.00	0.00	0.00
Combined	154.18	324.70	2327.78	2761.13





Daily Science Report

11/16/2016

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Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Wed 16 Nov

The Day started with the vessel continuing the Circle for the Recording system Lockup. At 03:14 UTC the vessel restarted Line MCS08A which continued until 06:50 UTC. A normal line change commenced and the Vessel started Line MCS04 at 09:44 UTC which continued throughout the day.

Daily Comment Summaries - Plan for Tomorrow

Wed 16 Nov

The Vessel will start the day continuing Line MCS04, which is expected to end at ~02:55 UTC. The Vessel will make line change to MCS05 which is expected to start at ~05:20 UTC and continue to ~14:10 UTC. The vessel will make another line change to MCS19 which should start ~08:00 UTC and continue throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Recording	DT_RC	Wed 16. Nov 00:00	Wed 16. Nov 03:14	3.233
Downtime due to recording systems. - Circling around to pickup re-shoot and remainder of LINE MCS08				
Recording	DT_RC	Wed 16. Nov 03:14	Wed 16. Nov 04:35	1.350
SOL Seq 20 MGL1610MCS08A FGSP=46765 Hdg=246.9° Overlap EOL Seq 20 MGL1610MCS08A LGSP=46862 Complete SOL Water Depth=7116m				
Recording	DT_RC	Wed 16. Nov 04:35	Wed 16. Nov 05:18	0.717
SOL Seq 20 MGL1610MCS08A FGSP=468632 Hdg=246.9° Reshoot EOL Seq 20 MGL1610MCS08A LGSP=46909 Complete				
Production Prime	AC_PP	Wed 16. Nov 05:18	Wed 16. Nov 06:50	1.533
SOL Seq 20 MGL1610MCS08A FGSP=46910 Hdg=246.9° Prime EOL Seq 20 MGL1610MCS08A LGSP=47011 Complete EOL Water Depth=5505m				
Prime Line Change	AC_PLC	Wed 16. Nov 06:50	Wed 16. Nov 09:44	2.900
Nominal Prime line change.				
Production Prime	AC_PP	Wed 16. Nov 09:44	Wed 16. Nov 24:00	14.267
SOL Seq 21 MGL1610MCS04 FGSP=47951 Hdg=71.8° Prime MSP Seq 21 MGL1610MCS04 LGSP=48884 LCSP=5421 Midnight SOL Water Depth=6291m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

16-Nov	Hours	% Percent
Acquisition	18.700	77.917
Prime Line Change	2.900	12.083
Production Prime	15.800	65.833
DownTime	5.300	22.083
Recording	5.300	22.083
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	18.892
Cetacean	1.033	0.166
Field Operations	21.667	3.472
Reconfiguration	8.883	1.424
Cable Reconfig	8.883	1.424
Transit	86.300	13.830
DownTime	22.233	3.563
Cetacean	8.500	1.362
Recording	10.317	1.653
Source	3.417	0.548
Mobilisation	86.700	13.894
Deployment	31.817	5.099
Mob Ashore	43.350	6.947
Testing	6.000	0.962



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Category	Hours	% Percent
Transit to Prospect	5.533	0.887
Acquisition	382.767	61.341
Infill Line Change	2.967	0.475
Prime Line Change	28.617	4.586
Production Prime	351.183	56.279
Demobilisation	14.417	2.310
Recovery	14.417	2.310
Total	624.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 16 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

Recording system Lock-up after internal ships Network issues

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 16 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un.Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez RojasUn. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student



11/16/2016

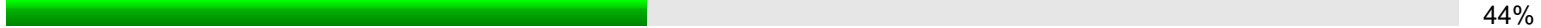
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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	18	1	0

Percentages Charged

Prime	59.36% of 4879.55 km (Sail Line)
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Average Daily Production

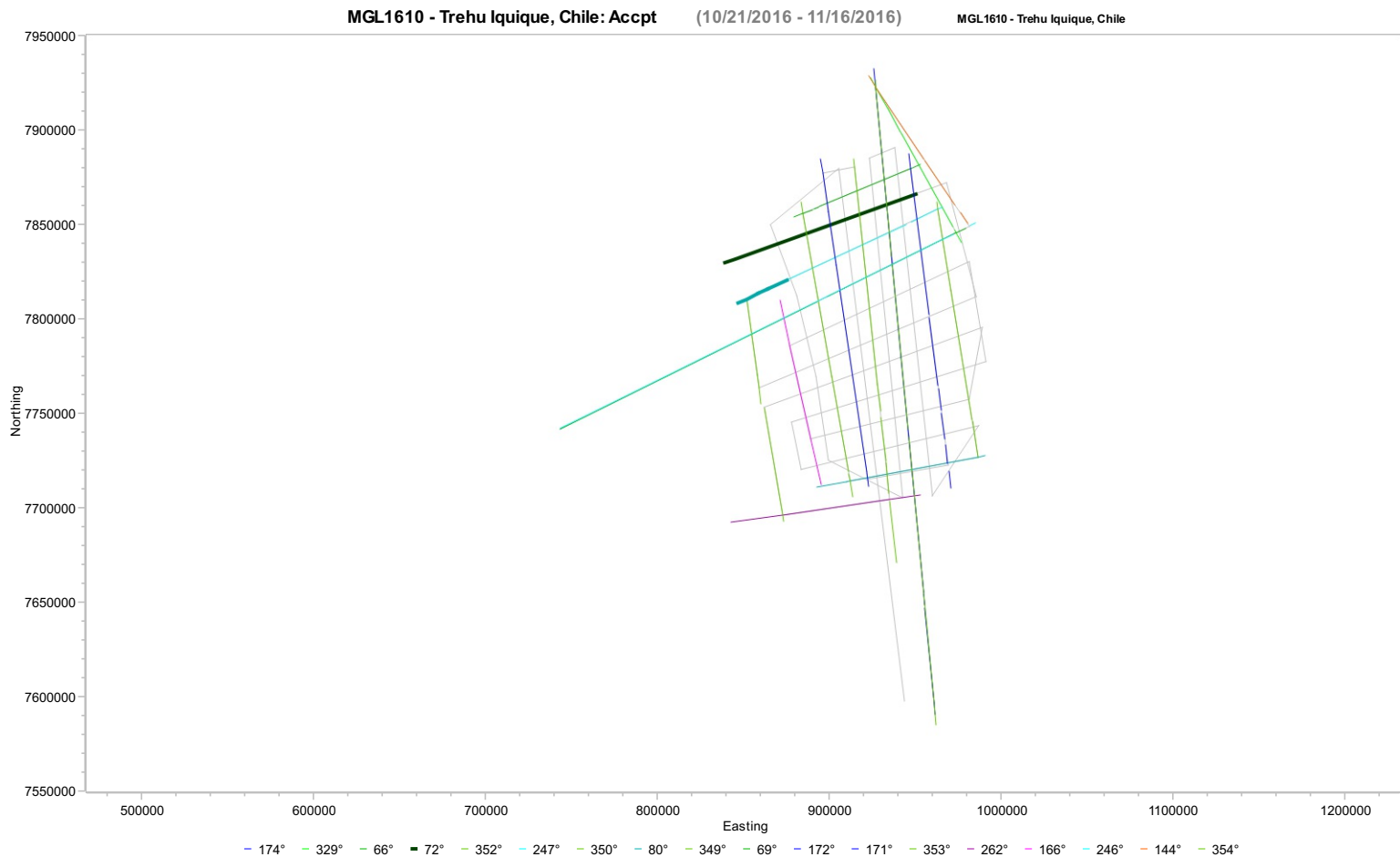
Average Accepted Daily Production	155.42 km
Average Charged Daily Production	152.45 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Wed 16 Nov	Marcus G Langseth	20 - 21	135.45
Total Production:			135.45

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	129.72	454.43	2457.50	2890.85
Prime, Reshoot	5.73	5.73	5.73	5.73
Combined	135.45	460.15	2463.22	2896.58
Total				
Prime	129.72	454.43	2457.50	2890.85
Prime, Reshoot	5.73	5.73	5.73	5.73
Combined	135.45	460.15	2463.22	2896.58





Daily Science Report

11/17/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus / David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Thu 17 Nov

The vessel started the day in production on Line MCS04, which concluded at 02:55 UTC. The vessel made a line change to Line MCS05, which started at 05:18 UTC and continued until 14:01 UTC. The vessel then made another line change to Line MCS19, which started at 17:02 UTC and continued throughout the rest of the day. There was two Power downs of the Source for PSO Sightings during line MCS19. During the Line change between MCS05 and MCS19, sub-array #1 and #2 where brought on-board for maintenance.

Daily Comment Summaries - Plan for Tomorrow

Thu 17 Nov

The vessel will start the day continuing production on Line MCS19, which is expected to conclude at ~10:30 UTC. At that time the vessel will make a line change to Line MCS06 and once production starts it is expected to continue throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Thu 17. Nov 00:00	Thu 17. Nov 02:55	2.917
SOL Seq 21 MGL1610MCS04 FGSP=48885 Hdg=71.8° Prime EOL Seq 21 MGL1610MCS04 LGSP=49078 Complete				
Prime Line Change	AC_PLC	Thu 17. Nov 02:55	Thu 17. Nov 05:18	2.383
Nominal Prime line change.				
Production Prime	AC_PP	Thu 17. Nov 05:18	Thu 17. Nov 14:01	8.717
SOL Seq 22 MGL1610MCS05 FGSP=836 FCSP=836 Hdg=163.7° Prime EOL Seq 22 MGL1610MCS05 LGSP=3686 LCSP=3686 Complete EOL Water Depth=840m				
Infill Line Change	AC_ILC	Thu 17. Nov 14:01	Thu 17. Nov 16:19	2.300
Nominal Infill line change.				
Source	DT_SC	Thu 17. Nov 16:19	Thu 17. Nov 17:02	0.717
Line Change Extended for Source Work Sub-Array 1 & 2				
Cetacean	DT_CT	Thu 17. Nov 17:02	Thu 17. Nov 17:23	0.350
NTBP Seq 23 MCS19 FSP=50963 LSP=50985				
Production Prime	AC_PP	Thu 17. Nov 17:23	Thu 17. Nov 20:20	2.950
SOL Seq 23 MGL1610MCS19 FGSP=50986 Hdg=251.8° Prime EOL Seq 23 MGL1610MCS19 LGSP=51181 Incomplete SOL Water Depth=745m				
Cetacean	DT_CT	Thu 17. Nov 20:20	Thu 17. Nov 20:39	0.317
NTBP Seq 23 MCS19 FSP=51182 LSP=51202				
Production Prime	AC_PP	Thu 17. Nov 20:39	Thu 17. Nov 24:00	3.350
SOL Seq 23 MGL1610MCS19 FGSP=512030 Hdg=251.8° Prime MSP Seq 23 MGL1610MCS19 LGSP=51423 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

17-Nov	Hours	% Percent
Acquisition	22.617	94.236
Infill Line Change	2.300	9.583
Prime Line Change	2.383	9.931
Production Prime	17.933	74.722
DownTime	1.383	5.764
Cetacean	0.667	2.778
Source	0.717	2.986
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	18.192
Cetacean	1.033	0.159
Field Operations	21.667	3.344
Reconfiguration	8.883	1.371
Cable Reconfig	8.883	1.371
Transit	86.300	13.318



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Category	Hours	% Percent
DownTime	23.617	3.645
Cetacean	9.167	1.415
Recording	10.317	1.592
Source	4.133	0.638
Mobilisation	86.700	13.380
Deployment	31.817	4.910
Mob Ashore	43.350	6.690
Testing	6.000	0.926
Transit to Prospect	5.533	0.854
Acquisition	405.383	62.559
Infill Line Change	5.267	0.813
Prime Line Change	31.000	4.784
Production Prime	369.117	56.962
Demobilisation	14.417	2.225
Recovery	14.417	2.225
Total	648.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 17 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

S1G1 - Broken Liner in the Fire Chamber and S1G9 - Broken Top Housing.

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Thu 17 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
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Sara Hussni - Alhisni GeoAzur Graduate student



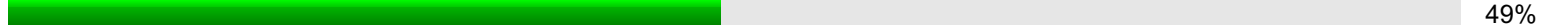
Jan HandelFree Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	20	0	0

Percentages Charged

Prime	62.38% of 4879.55 km (Sail Line)
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Average Daily Production

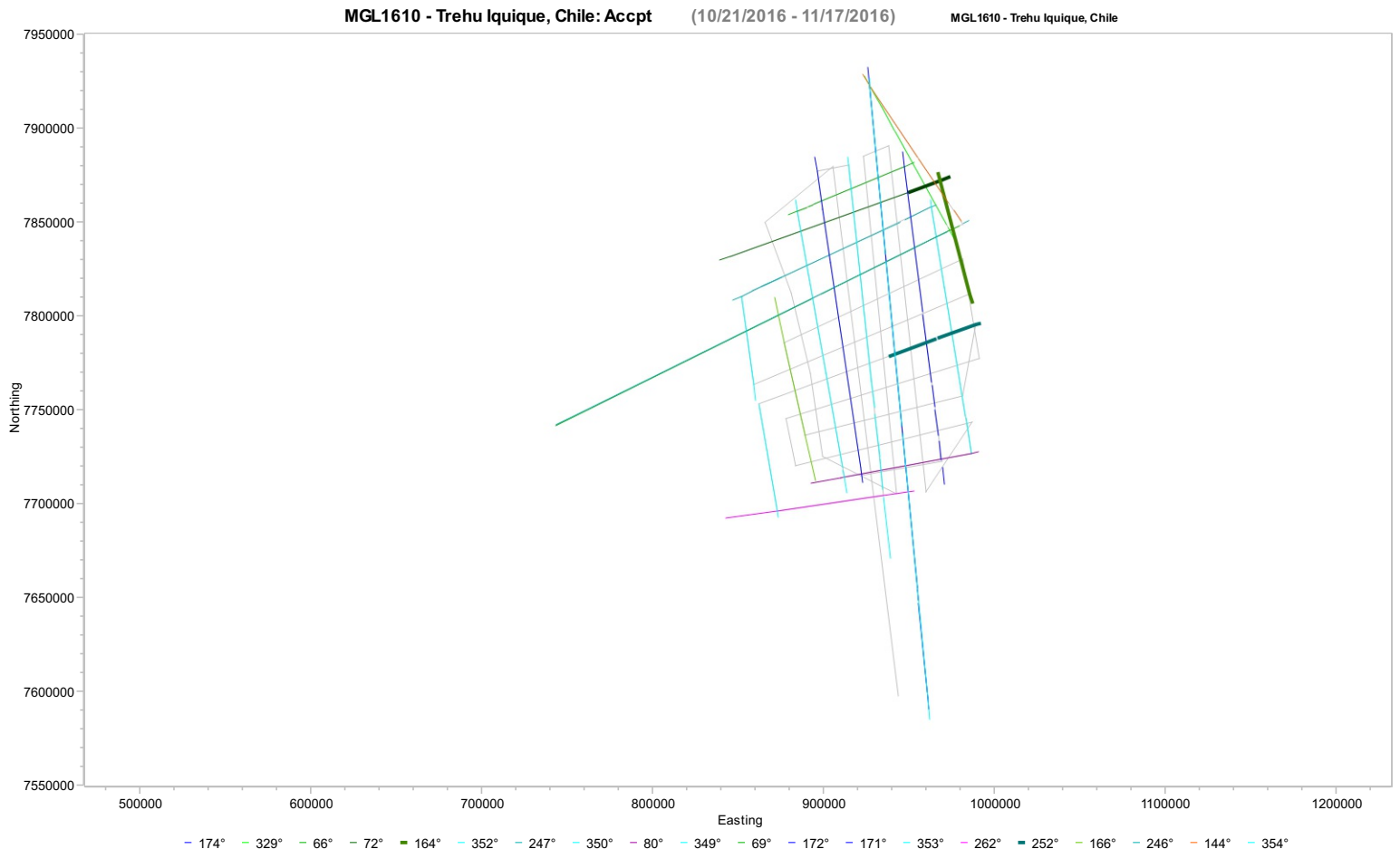
Average Accepted Daily Production	155.02 km
Average Charged Daily Production	152.19 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Thu 17 Nov	Marcus G Langseth	21 - 23	147.28
Total Production:			147.28

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	147.28	601.70	2604.78	3038.13
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	147.28	607.43	2610.50	3043.85
Total				
Prime	147.28	601.70	2604.78	3038.13
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	147.28	607.43	2610.50	3043.85





Daily Science Report

11/18/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus / David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Fri 18 Nov

The vessel started the day in production on Line MCS19, which continued until 10:30 UTC. The vessel made a line change to MCS06, which started at 12:20 UTC can continued throughout the end of the day. There was one brief shutdown of the source on Line MCS06 for a PSO Sighting.

Daily Comment Summaries - Plan for Tomorrow

Fri 18 Nov

The vessel will start the day continuing production on Line MCS06, and remain in this mode until ~06:00 UTC. The vessel will then make a Line to MCS20, which should take about 6 hours and the vessel will make a further line change to MCS21. It should continue on this line throughout the remainder of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Fri 18. Nov 00:00	Fri 18. Nov 10:30	10.500
SOL Seq 23 MGL1610MCS19 FGSP=51423 Hdg=251.8° Prime EOL Seq 23 MGL1610MCS19 LGSP=52114 Complete EOL Water Depth=4986m				
Prime Line Change	AC_PLC	Fri 18. Nov 10:30	Fri 18. Nov 12:20	1.833
Nominal Prime line change.				
Production Prime	AC_PP	Fri 18. Nov 12:20	Fri 18. Nov 23:12	10.867
SOL Seq 24 MGL1610MCS06 FGSP=52959 Hdg=69° Prime EOL Seq 24 MGL1610MCS06 LGSP=53671 Incomplete SOL Water Depth=4832m				
Cetacean	DT_CT	Fri 18. Nov 23:12	Fri 18. Nov 23:16	0.067
NTBP Seq 24 MCS06 FSP=53672 LSP=53675				
Production Prime	AC_PP	Fri 18. Nov 23:16	Fri 18. Nov 24:00	0.733
SOL Seq 24 MGL1610MCS06 FGSP=53676 Hdg=69° Prime MSP Seq 24 MGL1610MCS06 LGSP=53723 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

18-Nov	Hours	% Percent
Acquisition	23.933	99.722
Prime Line Change	1.833	7.639
Production Prime	22.100	92.083
DownTime	0.067	0.278
Cetacean	0.067	0.278
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	17.542
Cetacean	1.033	0.154
Field Operations	21.667	3.224
Reconfiguration	8.883	1.322
Cable Reconfig	8.883	1.322
Transit	86.300	12.842
DownTime	23.683	3.524
Cetacean	9.233	1.374
Recording	10.317	1.535
Source	4.133	0.615
Mobilisation	86.700	12.902
Deployment	31.817	4.735
Mob Ashore	43.350	6.451
Testing	6.000	0.893
Transit to Prospect	5.533	0.823
Acquisition	429.317	63.886
Infill Line Change	5.267	0.784
Prime Line Change	32.833	4.886



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Category	Hours	% Percent
Production Prime	391.217	58.217
Demobilisation	14.417	2.145
Recovery	14.417	2.145
Total	672.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 18 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Fri 18 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
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Karla Rios RPS PSO
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Felipe Gonzalez RojasUn. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student



11/18/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	21	0	0

Percentages Charged	
Prime	64.22% of 5021.72 km (Sail Line)

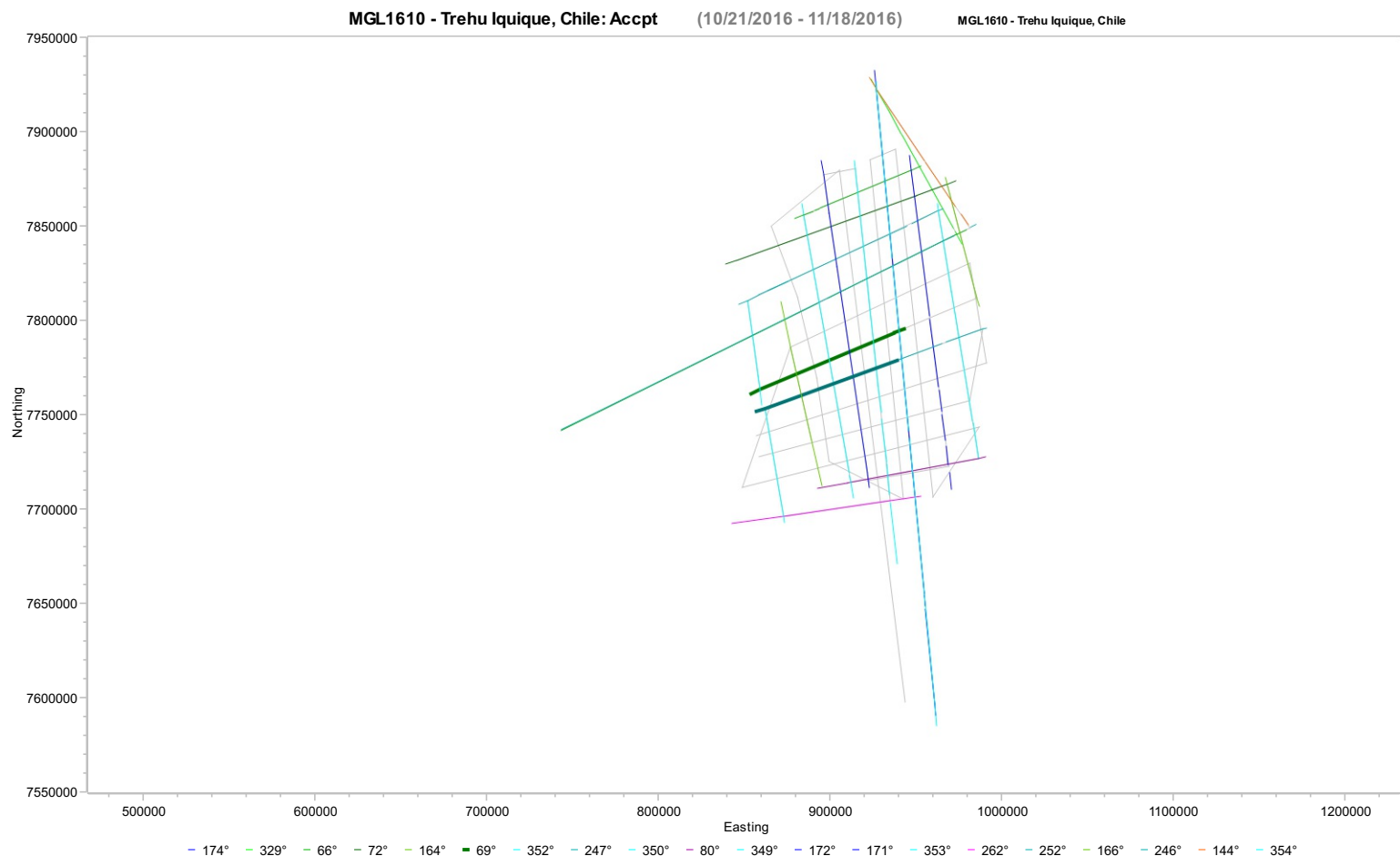
Average Daily Production	
Average Accepted Daily Production	156.27 km
Average Charged Daily Production	153.58 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Fri 18 Nov	Marcus G Langseth	23 - 24	181.28
Total Production:			181.28

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	181.28	782.98	2786.05	3219.40
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	181.28	788.70	2791.78	3225.13
Total				
Prime	181.28	782.98	2786.05	3219.40
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	181.28	788.70	2791.78	3225.13





Daily Science Report

11/19/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sat 19 Nov

The Vessel started the Day in production on Line MCS06, which concluded at 06:06 UTC. There was a short line change to MCS20 which began at 06:46 and continued until 12:43 UTC. There was another short line change to MCS 21, which began at 13:56 and continued throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Sat 19 Nov

The Vessel will start the day continuing production on Line MCS21. This line is expected to continue to ~06:00 UTC at which time the vessel will make a line change to MCS25. Line MCS25 is expected to start ~08:00 UTC and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sat 19. Nov 00:00	Sat 19. Nov 06:06	6.100
SOL Seq 24 MGL1610MCS06 FGSP=53724 Hdg=69° Prime EOL Seq 24 MGL1610MCS06 LGSP=54125 Complete EOL Water Depth=674m				
Prime Line Change	AC_PLC	Sat 19. Nov 06:06	Sat 19. Nov 06:46	0.667
Nominal Prime line change.				
Production Prime	AC_PP	Sat 19. Nov 06:46	Sat 19. Nov 12:43	5.950
SOL Seq 25 MGL1610MCS20 FGSP=55001 FCSP=1001 Hdg=191.6° Prime EOL Seq 25 MGL1610MCS20 LGSP=55387 Complete SOL Water Depth=672m EOL Water Depth=493m				
Prime Line Change	AC_PLC	Sat 19. Nov 12:43	Sat 19. Nov 13:15	0.533
Nominal Prime line change.				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

19-Nov	Hours	% Percent
Acquisition	13.250	55.208
Prime Line Change	1.200	5.000
Production Prime	12.050	50.208
Day's Total	13.250	55.208

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	17.203
Cetacean	1.033	0.151
Field Operations	21.667	3.162
Reconfiguration	8.883	1.296
Cable Reconfig	8.883	1.296
Transit	86.300	12.594
DownTime	23.683	3.456
Cetacean	9.233	1.347
Recording	10.317	1.506
Source	4.133	0.603
Mobilisation	86.700	12.652
Deployment	31.817	4.643
Mob Ashore	43.350	6.326
Testing	6.000	0.876
Transit to Prospect	5.533	0.807
Acquisition	442.567	64.585
Infill Line Change	5.267	0.769
Prime Line Change	34.033	4.967
Production Prime	403.267	58.850
Demobilisation	14.417	2.104
Recovery	14.417	2.104



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Category	Hours	% Percent
Total	685.250	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 19 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sat 19 Nov

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11/19/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	23	0	0

Percentages Charged	
Prime	67.83% of 5021.72 km (Sail Line)

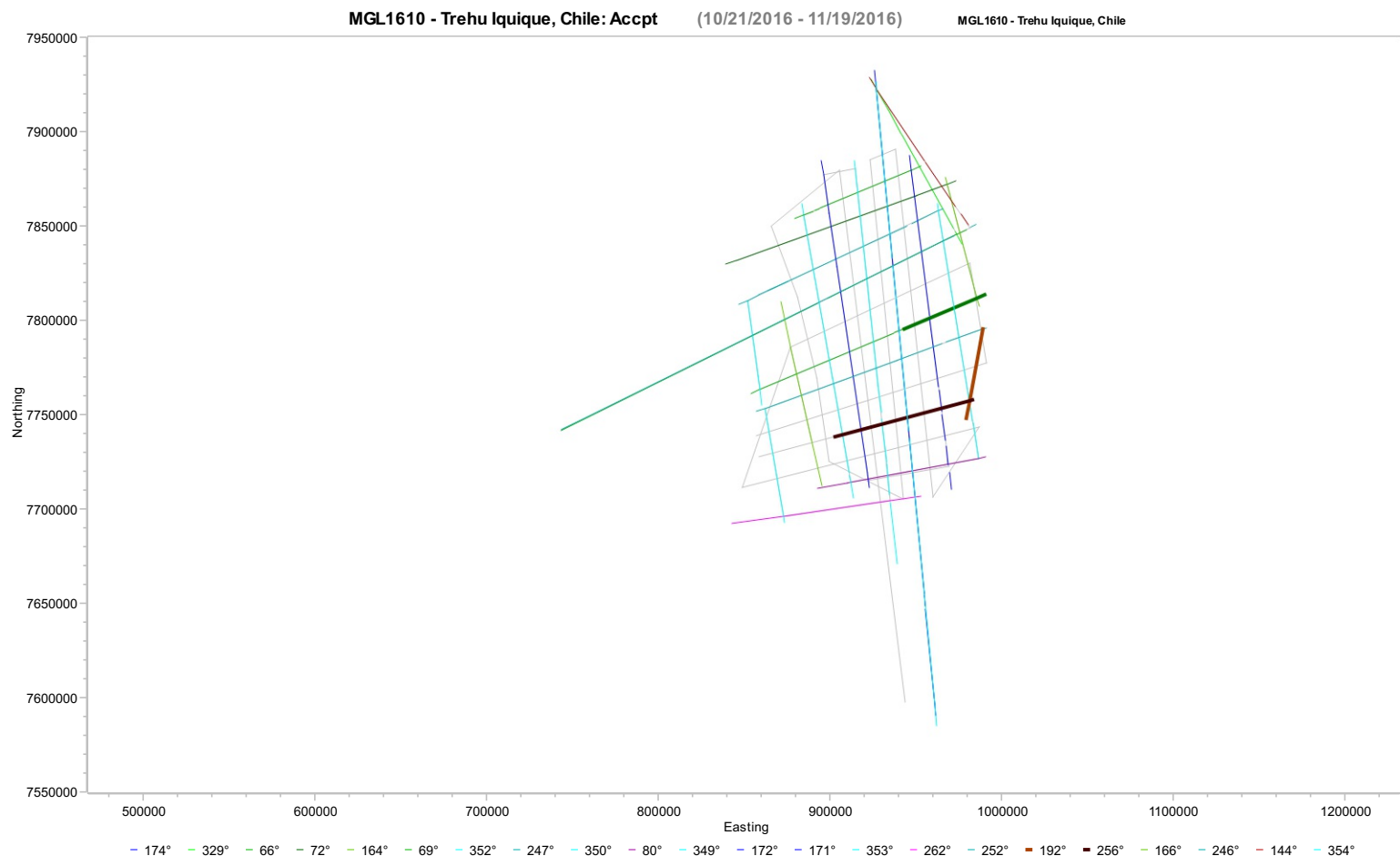
Average Daily Production	
Average Accepted Daily Production	157.38 km
Average Charged Daily Production	154.82 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sat 19 Nov	Marcus G Langseth	24 - 26	180.88
Total Production:			180.88

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	180.88	963.85	2966.93	3400.28
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	180.88	969.58	2972.65	3406.00
Total				
Prime	180.88	963.85	2966.93	3400.28
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	180.88	969.58	2972.65	3406.00





Daily Science Report

11/19/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sat 19 Nov

The Vessel started the Day in production on Line MCS06, which concluded at 06:06 UTC. There was a short line change to MCS20 which began at 06:46 and continued until 12:43 UTC. There was another short line change to MCS 21, which began at 13:56 and continued throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Sat 19 Nov

The Vessel will start the day continuing production on Line MCS21. This line is expected to continue to ~06:00 UTC at which time the vessel will make a line change to MCS25. Line MCS25 is expected to start ~08:00 UTC and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sat 19. Nov 00:00	Sat 19. Nov 06:06	6.100
SOL Seq 24 MGL1610MCS06 FGSP=53724 Hdg=69° Prime EOL Seq 24 MGL1610MCS06 LGSP=54125 Complete EOL Water Depth=674m				
Prime Line Change	AC_PLC	Sat 19. Nov 06:06	Sat 19. Nov 06:46	0.667
Nominal Prime line change.				
Production Prime	AC_PP	Sat 19. Nov 06:46	Sat 19. Nov 12:43	5.950
SOL Seq 25 MGL1610MCS20 FGSP=55001 FCSP=1001 Hdg=191.6° Prime EOL Seq 25 MGL1610MCS20 LGSP=55387 Complete SOL Water Depth=672m EOL Water Depth=493m				
Prime Line Change	AC_PLC	Sat 19. Nov 12:43	Sat 19. Nov 13:56	1.217
Nominal Prime line change.				
Production Prime	AC_PP	Sat 19. Nov 13:56	Sat 19. Nov 24:00	10.067
SOL Seq 26 MGL1610MCS21 FGSP=55986 Hdg=256.3° Prime MSP Seq 26 MGL1610MCS21 LGSP=56646 Midnight SOL Water Depth=802m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

19-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	1.883	7.847
Production Prime	22.117	92.153
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	16.937
Cetacean	1.033	0.148
Field Operations	21.667	3.113
Reconfiguration	8.883	1.276
Cable Reconfig	8.883	1.276
Transit	86.300	12.399
DownTime	23.683	3.403
Cetacean	9.233	1.327
Recording	10.317	1.482
Source	4.133	0.594
Mobilisation	86.700	12.457
Deployment	31.817	4.571
Mob Ashore	43.350	6.228
Testing	6.000	0.862
Transit to Prospect	5.533	0.795
Acquisition	453.317	65.132
Infill Line Change	5.267	0.757



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Category	Hours	% Percent
Prime Line Change	34.717	4.988
Production Prime	413.333	59.387
Demobilisation	14.417	2.071
Recovery	14.417	2.071
Total	696.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 19 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sat 19 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un.Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez RojasUn. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student



11/19/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	23	0	0

Percentages Charged

Prime	67.83% of 5021.72 km (Sail Line)
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Average Daily Production

Average Accepted Daily Production	157.38 km
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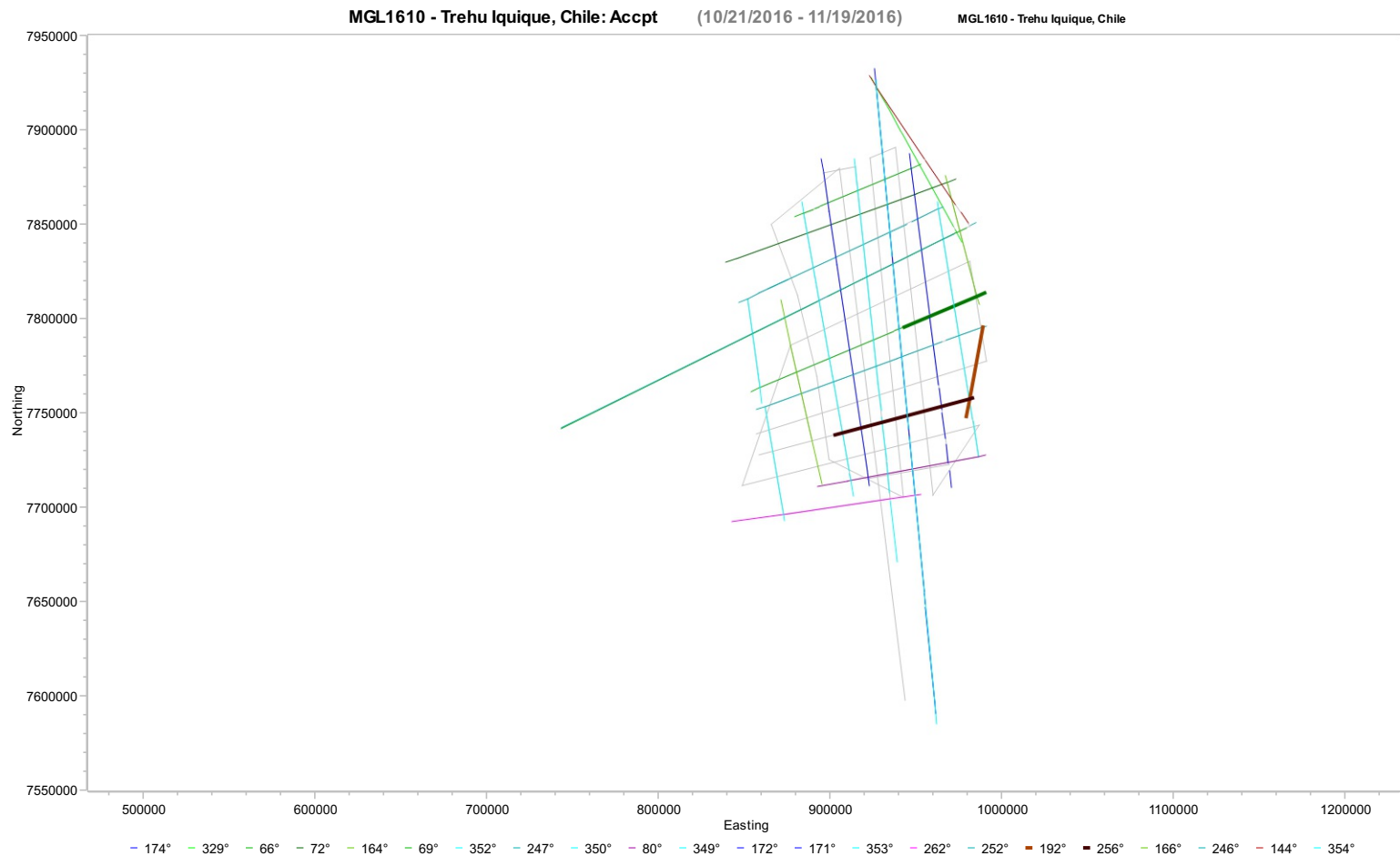
Average Charged Daily Production	154.82 km
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Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sat 19 Nov	Marcus G Langseth	24 - 26	180.88
Total Production:			180.88

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	180.88	963.85	2966.93	3400.28
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	180.88	969.58	2972.65	3406.00
Total				
Prime	180.88	963.85	2966.93	3400.28
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	180.88	969.58	2972.65	3406.00





Daily Science Report

11/20/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sun 20 Nov

The Vessel started the day continuing production on Line MCS21. This line concluded at 05:12 UTC and a line change to MCS25 commenced. The vessel started Line MCS25 at 07:10 UTC and continued on this line throughout the remainder of the day.

Daily Comment Summaries - Plan for Tomorrow

Sun 20 Nov

The vessel will start the day continuing production on Line MCS25. Shortly after day change the vessel will complete Line MCS25 and make a short line change to Line MCS24. Line MCS24 is expected to begin at ~00:24 UTC and continue to ~06:36 UTC. At that time the vessel will make yet another line change to Line MCS23 which is expected to start at ~07:35 UTC and continue throughout the remainder of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 20. Nov 00:00	Sun 20. Nov 05:12	5.200
SOL Seq 26 MGL1610MCS21 FGSP=56646 Hdg=256.3° Prime EOL Seq 26 MGL1610MCS21 LGSP=56990 Complete				
Prime Line Change	AC_PLC	Sun 20. Nov 05:12	Sun 20. Nov 07:10	1.967
Nominal Prime line change.				
Production Prime	AC_PP	Sun 20. Nov 07:10	Sun 20. Nov 24:00	16.833
SOL Seq 27 MGL1610MCS25 FGSP=57038 Hdg=74° Prime MSP Seq 27 MGL1610MCS25 LGSP=58147 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

20-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	1.967	8.194
Production Prime	22.033	91.806
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	16.373
Cetacean	1.033	0.144
Field Operations	21.667	3.009
Reconfiguration	8.883	1.234
Cable Reconfig	8.883	1.234
Transit	86.300	11.986
DownTime	23.683	3.289
Cetacean	9.233	1.282
Recording	10.317	1.433
Source	4.133	0.574
Mobilisation	86.700	12.042
Deployment	31.817	4.419
Mob Ashore	43.350	6.021
Testing	6.000	0.833
Transit to Prospect	5.533	0.769
Acquisition	477.317	66.294
Infill Line Change	5.267	0.731
Prime Line Change	36.683	5.095
Production Prime	435.367	60.468
Demobilisation	14.417	2.002
Recovery	14.417	2.002
Total	720.000	



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Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 20 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 20 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

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Michael Riedel GEOMAR Co-chief
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Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	24	1	0

Percentages Charged	
Prime	71.44% of 5021.72 km (Sail Line)

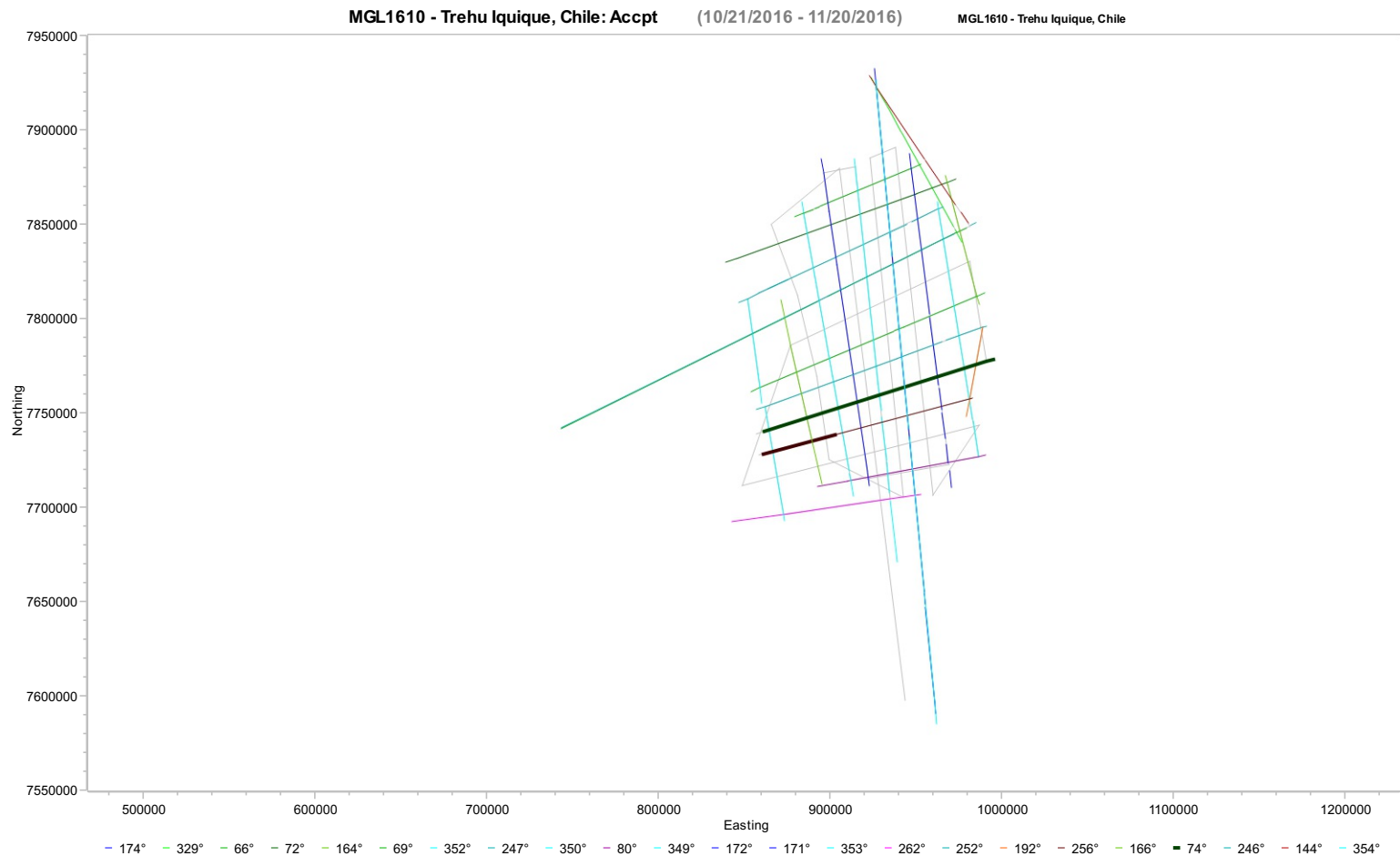
Average Daily Production	
Average Accepted Daily Production	158.44 km
Average Charged Daily Production	155.99 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sun 20 Nov	Marcus G Langseth	26 - 27	181.75
Total Production:			181.75

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	181.75	1145.60	3148.68	3582.03
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	181.75	1151.32	3154.40	3587.75
Total				
Prime	181.75	1145.60	3148.68	3582.03
Prime, Reshoot	0.00	5.73	5.73	5.73
Combined	181.75	1151.32	3154.40	3587.75





Daily Science Report

11/21/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Mon 21 Nov

The Vessel started the Day on Line MCS25, which continued to 06:36 UTC. At that time a line change was made to Line MCS23. Line MCS23 started at 07:35 UTC and continued until 23:27 UTC. At this time another line change was made this time to MCS26. Line MCS26 Started at 23:30 and continued throughout the rest of the day.

During Line MCS23 there was two Power downs for PSO Sightings the Longest of the two was ~1.5 hours.

Daily Comment Summaries - Plan for Tomorrow

Mon 21 Nov

The Vessel will start the day continuing production on Line MCS26. This line is expected to end at ~07:30 UTC at which time the vessel will make a line change to MCS27. Line MCS27 is expected to start at ~08:20 UTC and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Mon 21. Nov 00:00	Mon 21. Nov 00:13	0.217
SOL Seq 27 MGL1610MCS25 FGSP=58148Hdg=74° Prime EOL Seq 27 MGL1610MCS25 LGSP=58162 Complete				
Prime Line Change	AC_PLC	Mon 21. Nov 00:13	Mon 21. Nov 00:24	0.183
Nominal Prime line change.				
Production Prime	AC_PP	Mon 21. Nov 00:24	Mon 21. Nov 06:36	6.200
SOL Seq 28 MGL1610MCS24 FGSP=59011 Hdg=349.2° Prime EOL Seq 28 MGL1610MCS24 LGSP=59421 Complete				
Prime Line Change	AC_PLC	Mon 21. Nov 06:36	Mon 21. Nov 07:35	0.983
Nominal Prime line change.				
Production Prime	AC_PP	Mon 21. Nov 07:35	Mon 21. Nov 10:51	3.267
SOL Seq 29 MGL1610MCS23 FGSP=59966 Hdg=246.9° Prime EOL Seq 29 MGL1610MCS23 LGSP=60181 Incomplete				
Cetacean	DT_CT	Mon 21. Nov 10:51	Mon 21. Nov 11:01	0.167
NTBP Seq 29 MCS23 FSP=60182 LSP=60191				
Production Prime	AC_PP	Mon 21. Nov 11:01	Mon 21. Nov 15:51	4.833
SOL Seq 29 MGL1610MCS23 FGSP=60192 Hdg=246.9° Prime EOL Seq 29 MGL1610MCS23 LGSP=60509 Incomplete				
Cetacean	DT_CT	Mon 21. Nov 15:51	Mon 21. Nov 17:14	1.383
NTBP Seq 29 MCS23 FSP=60510 LSP=60600				
Production Prime	AC_PP	Mon 21. Nov 17:14	Mon 21. Nov 23:27	6.217
SOL Seq 29 MGL1610MCS23 FGSP=60601 Hdg=246.9° Prime EOL Seq 29 MGL1610MCS23 LGSP=61011 Complete				
Prime Line Change	AC_PLC	Mon 21. Nov 23:27	Mon 21. Nov 23:30	0.050
Nominal Prime line change.				
Production Prime	AC_PP	Mon 21. Nov 23:30	Mon 21. Nov 24:00	0.500
SOL Seq 30 MGL1610MCS26 FGSP=62002 Hdg=200.7° Prime MSP Seq 30 MGL1610MCS26 LGSP=62034 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

21-Nov	Hours	% Percent
Acquisition	22.450	93.542
Prime Line Change	1.217	5.069
Production Prime	21.233	88.472
DownTime	1.550	6.458
Cetacean	1.550	6.458
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	15.845
Cetacean	1.033	0.139
Field Operations	21.667	2.912



Category	Hours	% Percent
Reconfiguration	8.883	1.194
Cable Reconfig	8.883	1.194
Transit	86.300	11.599
DownTime	25.233	3.392
Cetacean	10.783	1.449
Recording	10.317	1.387
Source	4.133	0.556
Mobilisation	86.700	11.653
Deployment	31.817	4.276
Mob Ashore	43.350	5.827
Testing	6.000	0.806
Transit to Prospect	5.533	0.744
Acquisition	499.767	67.173
Infill Line Change	5.267	0.708
Prime Line Change	37.900	5.094
Production Prime	456.600	61.371
Demobilisation	14.417	1.938
Recovery	14.417	1.938
Total	744.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 21 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report



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Daily Comment Summaries - Personnel Onboard

Mon 21 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

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Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	27	1	0

Percentages Charged	
Prime	74.91% of 5021.72 km (Sail Line)

Average Daily Production	
Average Accepted Daily Production	159.09 km
Average Charged Daily Production	156.74 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Mon 21 Nov	Marcus G Langseth	27 - 30	174.05
Total Production:			174.05

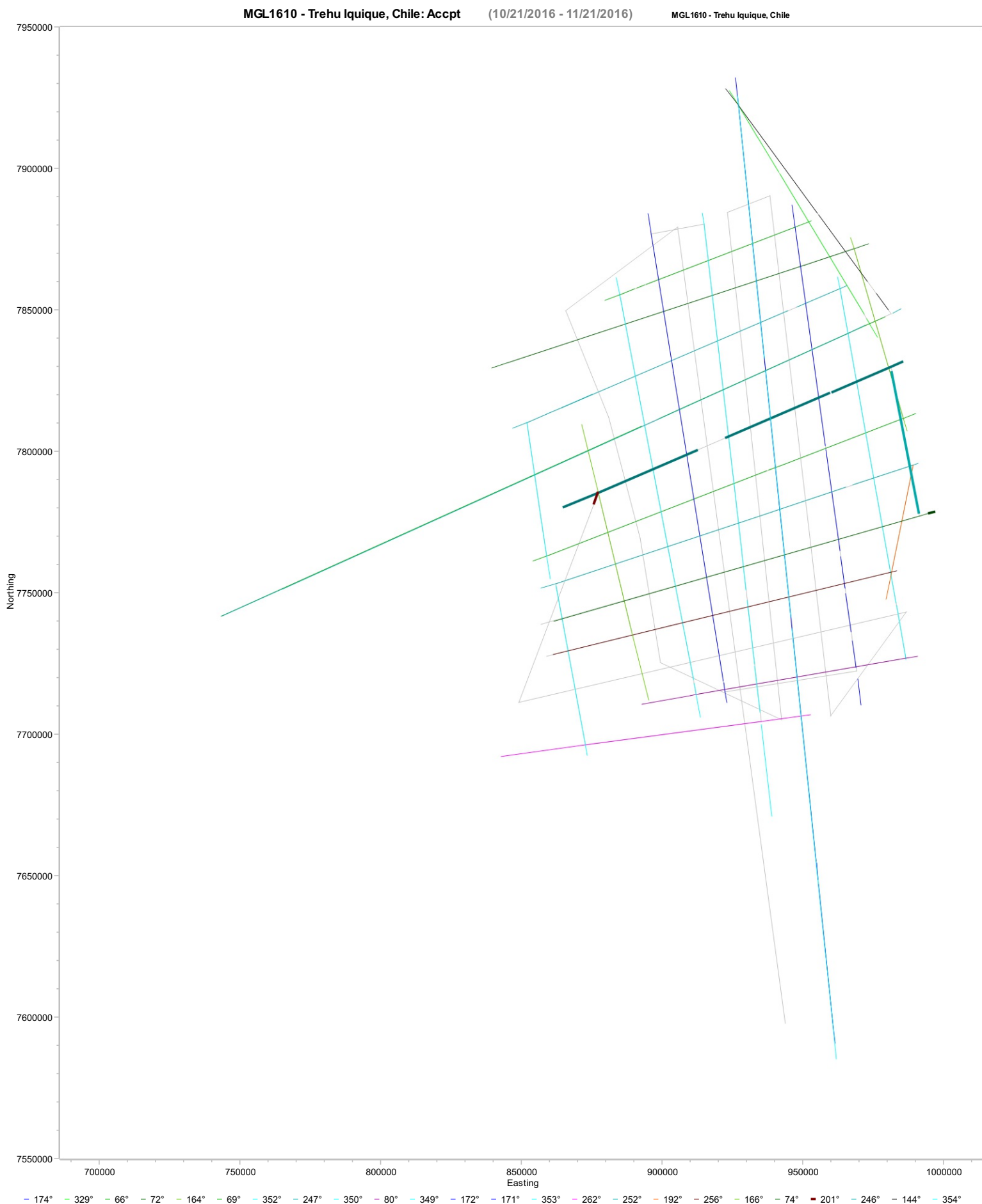
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	174.05	174.05	3322.73	3756.08
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	174.05	174.05	3328.45	3761.80
Total				
Prime	174.05	174.05	3322.73	3756.08
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	174.05	174.05	3328.45	3761.80



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Daily Science Report

11/22/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Tue 22 Nov

The Vessel started the day continuing Line MCS26, which ended at 07:34 UTC. The vessel then made a line change to Line MCS27, which started at 08:24 UTC and continued throughout the rest of the day. There was two power downs on Line MCS27 for PSO sightings.

Daily Comment Summaries - Plan for Tomorrow

Tue 22 Nov

The Vessel will start the day continuing on Line MCS27. This line is expected to be completed at ~01:32 UTC. The vessel will then make a line change to MCS28, which is expected to begin at ~02:10 and continue until ~07:30 UTC. The vessel will then make another line change to MCS29 which is expected to begin at ~08:45 and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 22. Nov 00:00	Tue 22. Nov 07:34	7.567
SOL Seq 30 MGL1610MCS26 FGSP=62035 Hdg=200.7° Prime EOL Seq 30 MGL1610MCS26 LGSP=62533 Complete				
Prime Line Change	AC_PLC	Tue 22. Nov 07:34	Tue 22. Nov 08:24	0.833
Nominal Prime line change.				
Production Prime	AC_PP	Tue 22. Nov 08:24	Tue 22. Nov 21:01	12.617
SOL Seq 31 MGL1610MCS27 FGSP=63050 Hdg=76.9° Prime EOL Seq 31 MGL1610MCS27 LGSP=63878 Incomplete				
Cetacean	DT_CT	Tue 22. Nov 21:01	Tue 22. Nov 21:14	0.217
NTBP Seq 31 MCS27 FSP=63879 LSP=62892				
Production Prime	AC_PP	Tue 22. Nov 21:14	Tue 22. Nov 21:23	0.150
SOL Seq 31 MGL1610MCS27 FGSP=63893 Hdg=76.9° Prime EOL Seq 31 MGL1610MCS27 LGSP=63904 Incomplete				
Cetacean	DT_CT	Tue 22. Nov 21:23	Tue 22. Nov 21:33	0.167
NTBP Seq 31 MCS27 FSP=63905 LSP=63913				
Production Prime	AC_PP	Tue 22. Nov 21:33	Tue 22. Nov 24:00	2.450
SOL Seq 31 MGL1610MCS27 FGSP=63914 Hdg=76.9° Prime MSP Seq 31 MGL1610MCS27 LGSP=64073 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

22-Nov	Hours	% Percent
Acquisition	23.617	98.403
Prime Line Change	0.833	3.472
Production Prime	22.783	94.931
DownTime	0.383	1.597
Cetacean	0.383	1.597
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	15.349
Cetacean	1.033	0.135
Field Operations	21.667	2.821
Reconfiguration	8.883	1.157
Cable Reconfig	8.883	1.157
Transit	86.300	11.237
DownTime	25.617	3.336
Cetacean	11.167	1.454
Recording	10.317	1.343
Source	4.133	0.538
Mobilisation	86.700	11.289
Deployment	31.817	4.143
Mob Ashore	43.350	5.645
Testing	6.000	0.781
Transit to Prospect	5.533	0.720



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Category	Hours	% Percent
Acquisition	523.383	68.149
Infill Line Change	5.267	0.686
Prime Line Change	38.733	5.043
Production Prime	479.383	62.420
Demobilisation	14.417	1.877
Recovery	14.417	1.877
Total	768.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 22 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Tue 22 Nov

Technical Staff On-board the Langseth

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David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
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Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
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Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student



11/22/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	28	1	0

Percentages Charged

Prime	78.64% of 5021.72 km (Sail Line)
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Average Daily Production

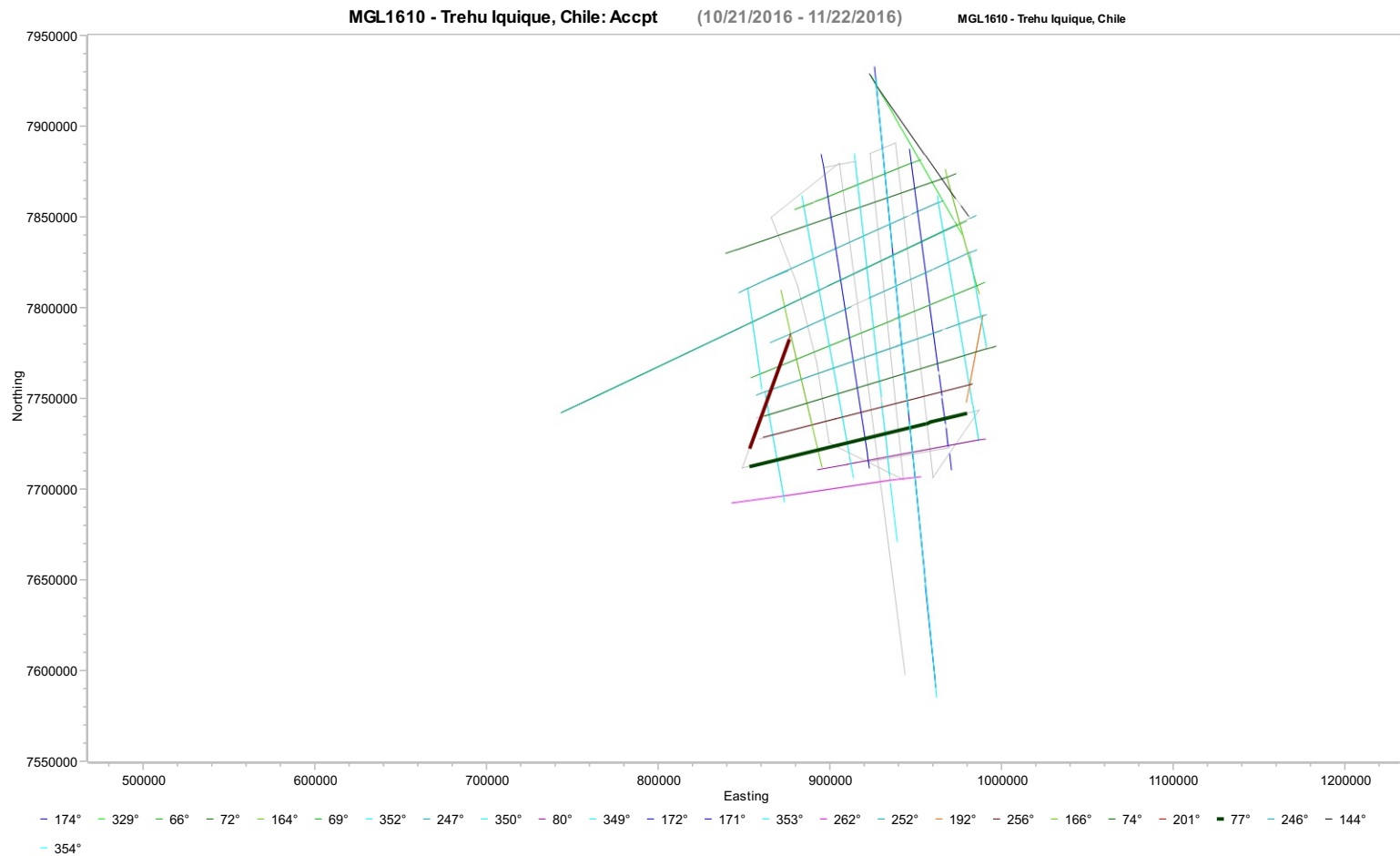
Average Accepted Daily Production	160.22 km
Average Charged Daily Production	157.96 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Tue 22 Nov	Marcus G Langseth	30 - 31	187.18
Total Production:			187.18

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	187.18	361.23	3509.90	3943.25
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	187.18	361.23	3515.63	3948.98
Total				
Prime	187.18	361.23	3509.90	3943.25
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	187.18	361.23	3515.63	3948.98





Daily Science Report

11/23/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Wed 23 Nov

The Vessel started the day continuing production on Line MCS27. This line was completed at 01:32 UTC. The vessel made a line change to MCS28. which began at 02:11 and continue until 07:28 UTC. The vessel then made another line change to MCS29 which started at 08:46 and continue throughout the rest of the day.

Line MCS28 was ended Slightly Early to avoid a Fishing Vessel and his gear. During Line MCS29 there was a number of power downs for PSO Sightings.

Daily Comment Summaries - Plan for Tomorrow

Wed 23 Nov

The vessel will start the day in Production on Line MCS29, which is expected to conclude at ~06:50 UTC. The vessel will make a line change to Line MCS30, which is expected to start at ~09:00 UTC and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 23. Nov 00:00	Wed 23. Nov 01:32	1.533
SOL Seq 31 MGL1610MCS27 FGSP=64074 Hdg=76.9° Prime EOL Seq 31 MGL1610MCS27 LGSP=64176 Complete EOL Water Depth=439m				
Prime Line Change	AC_PLC	Wed 23. Nov 01:32	Wed 23. Nov 02:11	0.650
Nominal Prime line change.				
Production Prime	AC_PP	Wed 23. Nov 02:11	Wed 23. Nov 07:28	5.283
SOL Seq 32 MGL1610MCS28 FGSP=65001 Hdg=216.1° Prime EOL Seq 32 MGL1610MCS28 LGSP=65327 Complete SOL Water Depth=139m EOL Water Depth=191m Early EOL due to Finish Traffic				
Prime Line Change	AC_PLC	Wed 23. Nov 07:28	Wed 23. Nov 08:46	1.300
Nominal Prime line change.				
Production Prime	AC_PP	Wed 23. Nov 08:46	Wed 23. Nov 13:11	4.417
SOL Seq 33 MGL1610MCS29 FGSP=66004 Hdg=353.2° Prime EOL Seq 33 MGL1610MCS29 LGSP=66293 Incomplete SOL Water Depth=932m				
Cetacean	DT_CT	Wed 23. Nov 13:11	Wed 23. Nov 14:26	1.250
NTBP Seq 33 MCS29 FSP=66294 66374				
Production Prime	AC_PP	Wed 23. Nov 14:26	Wed 23. Nov 15:40	1.233
SOL Seq 33 MGL1610MCS29 FGSP=66375 Hdg=353.2° Prime EOL Seq 33 MGL1610MCS29 LGSP=66457 Incomplete				
Cetacean	DT_CT	Wed 23. Nov 15:40	Wed 23. Nov 15:50	0.167
NTBP Seq 33 MCS29 FSP=66458 LSP=66467				
Production Prime	AC_PP	Wed 23. Nov 15:50	Wed 23. Nov 16:13	0.383
SOL Seq 33 MGL1610MCS29 FGSP=66468 Hdg=353.2° Prime EOL Seq 33 MGL1610MCS29 LGSP=66493 Incomplete				
Cetacean	DT_CT	Wed 23. Nov 16:13	Wed 23. Nov 16:28	0.250
NTBP Seq 33 MCS29 FSP=66494 LSP=66509				
Production Prime	AC_PP	Wed 23. Nov 16:28	Wed 23. Nov 16:35	0.117
SOL Seq 33 MGL1610MCS29 FGSP=66510 Hdg=353.2° Prime EOL Seq 33 MGL1610MCS29 LGSP=66516 Incomplete				
Cetacean	DT_CT	Wed 23. Nov 16:35	Wed 23. Nov 16:46	0.183
NTBP Seq 33 MCS29 FSP=66517 LSP=66529				
Production Prime	AC_PP	Wed 23. Nov 16:46	Wed 23. Nov 24:00	7.233
SOL Seq 33 MGL1610MCS29 FGSP=66530 Hdg=353.2° Prime MSP Seq 33 MGL1610MCS29 LGSP=67005 Midnight				



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Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

23-Nov	Hours	% Percent
Acquisition	22.150	92.292
Prime Line Change	1.950	8.125
Production Prime	20.200	84.167
DownTime	1.850	7.708
Cetacean	1.850	7.708
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	14.884
Cetacean	1.033	0.130
Field Operations	21.667	2.736
Reconfiguration	8.883	1.122
Cable Reconfig	8.883	1.122
Transit	86.300	10.896
DownTime	27.467	3.468
Cetacean	13.017	1.644
Recording	10.317	1.303
Source	4.133	0.522
Mobilisation	86.700	10.947
Deployment	31.817	4.017
Mob Ashore	43.350	5.473
Testing	6.000	0.758
Transit to Prospect	5.533	0.699
Acquisition	545.533	68.880
Infill Line Change	5.267	0.665
Prime Line Change	40.683	5.137
Production Prime	499.583	63.079
Demobilisation	14.417	1.820
Recovery	14.417	1.820
Total	792.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 23 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report



11/23/2016

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Daily Comment Summaries - Personnel Onboard

Wed 23 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	30	1	0

Percentages Charged	
Prime	81.89% of 5021.72 km (Sail Line)

Average Daily Production	
Average Accepted Daily Production	160.34 km
Average Charged Daily Production	158.17 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Wed 23 Nov	Marcus G Langseth	31 - 33	163.47
Total Production:			163.47

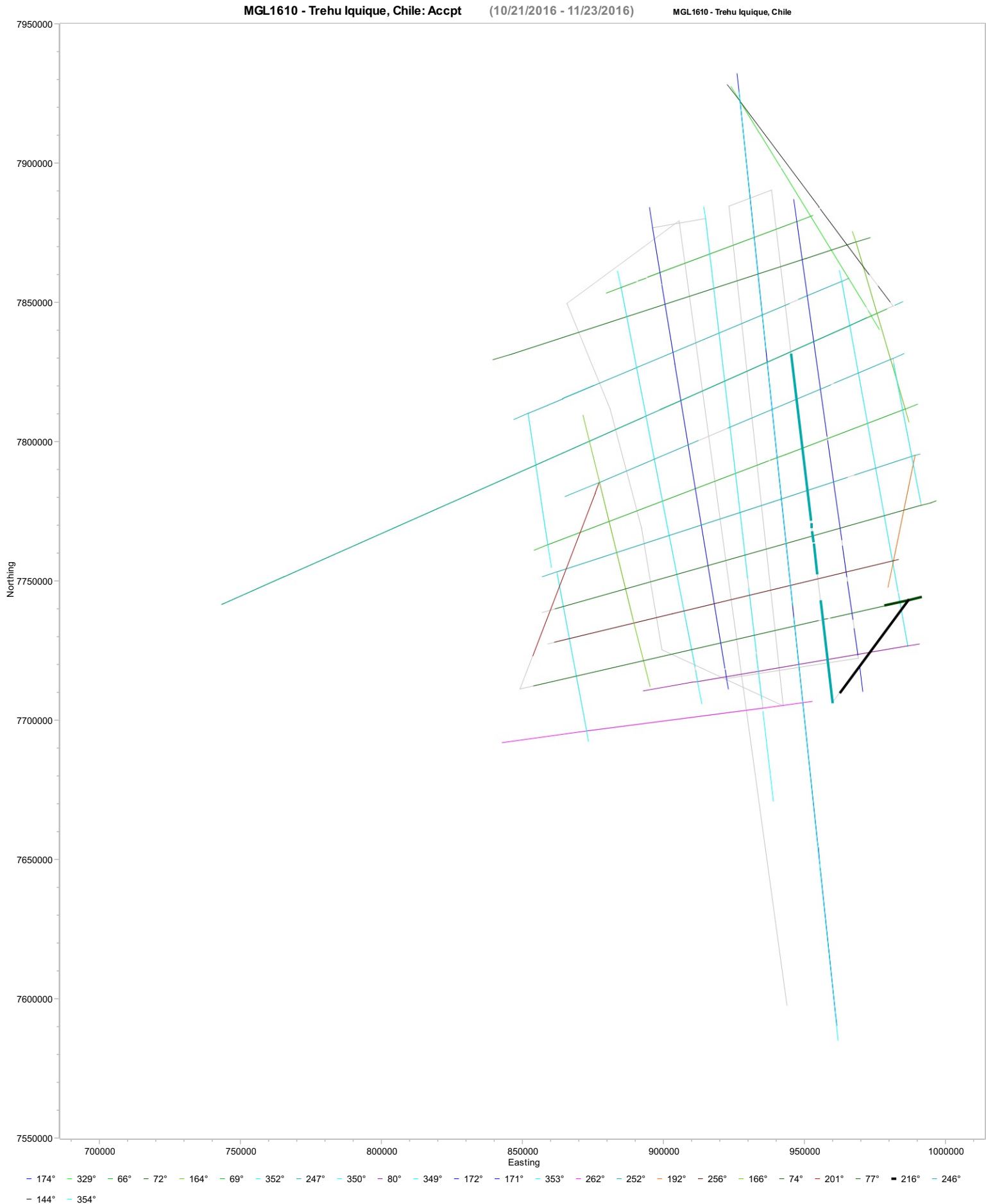
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	163.47	524.70	3673.38	4106.73
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	163.47	524.70	3679.10	4112.45
Total				
Prime	163.47	524.70	3673.38	4106.73
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	163.47	524.70	3679.10	4112.45



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Daily Science Report

11/24/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Thu 24 Nov

The Vessel started the Day on Line MCS29, which concluded at 06:52 UTC. The Vessel completed a line change and started Line MCS30 at 08:58, which continued throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Thu 24 Nov

The Vessel will start the day in production on MCS30. This line is expected to be completed at ~07:25 UTC. At which time the vessel will make a line change to MCS31, which is expected to start at 07:56 UTC. Line MCS1 is expected to conclude at ~14:00 UTC, as which time the vessel will make a line change to MCS32. This line is expected to start ~15:00 UTC and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Thu 24. Nov 00:00	Thu 24. Nov 06:52	6.867
SOL Seq 33 MGL1610MCS29 FGSP=67006 Hdg=353.2° Prime EOL Seq 33 MGL1610MCS29 LGSP=67457 Complete EOL Water Depth=1516m				
Prime Line Change	AC_PLC	Thu 24. Nov 06:52	Thu 24. Nov 08:58	2.100
Nominal Prime line change.				
Production Prime	AC_PP	Thu 24. Nov 08:58	Thu 24. Nov 24:00	15.033
SOL Seq 34 MGL1610MCS30 FGSP=68007 Hdg=173.9° Prime MSP Seq 34 MGL1610MCS30 LGSP=68997 Midnight SOL Water Depth=1893m				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

24-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	2.100	8.750
Production Prime	21.900	91.250
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	14.446
Cetacean	1.033	0.127
Field Operations	21.667	2.655
Reconfiguration	8.883	1.089
Cable Reconfig	8.883	1.089
Transit	86.300	10.576
DownTime	27.467	3.366
Cetacean	13.017	1.595
Recording	10.317	1.264
Source	4.133	0.507
Mobilisation	86.700	10.625
Deployment	31.817	3.899
Mob Ashore	43.350	5.312
Testing	6.000	0.735
Transit to Prospect	5.533	0.678
Acquisition	569.533	69.796
Infill Line Change	5.267	0.645
Prime Line Change	42.783	5.243
Production Prime	521.483	63.907
Demobilisation	14.417	1.767
Recovery	14.417	1.767
Total	816.000	



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Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 24 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Thu 24 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Hernandez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



11/24/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



85%

Prime Lines Completed



76%

Preplot Lines	Complete	Incomplete	Pending
41	31	1	0

Percentages Charged	
Prime	85.48% of 5021.72 km (Sail Line)

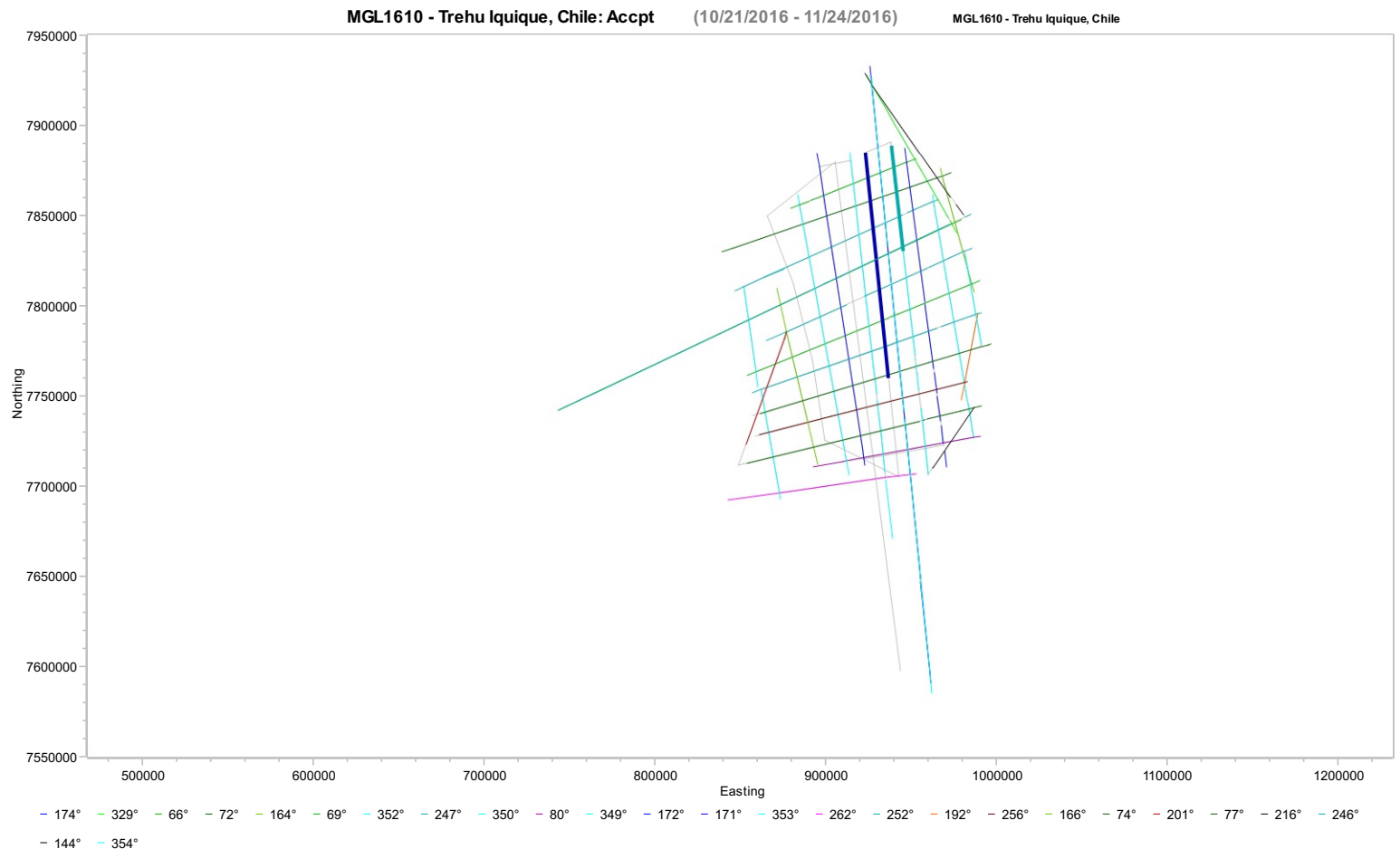
Average Daily Production	
Average Accepted Daily Production	161.08 km
Average Charged Daily Production	158.98 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Thu 24 Nov	Marcus G Langseth	33 - 34	180.12
Total Production:			180.12

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	180.12	704.83	3853.50	4286.85
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	180.12	704.83	3859.23	4292.58
Total				
Prime	180.12	704.83	3853.50	4286.85
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	180.12	704.83	3859.23	4292.58





Daily Science Report

11/25/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Fri 25 Nov

The vessel started the day in Production on Line MCS30, which concluded at 07:25. After a short line change Production commenced on Line MCS31 at 07:56 UTC and continued until 13:03 UTC. After another short line change production began on Line MCS32 at 13:16 UTC and continued until 19:51 UTC. After yet another short line change production began on Line MCS32A at 19:53 UTC and Continued throughout the rest of the day.

There was a short power down on Line MCS31 for a Compressor shutdown due to a cooling water leak. There was also a power down on Line MCS32 for a PSO Sighting.

Daily Comment Summaries - Plan for Tomorrow

Fri 25 Nov

The Vessel will start the day continuing production on line MCS32A. At ~01:15 UTC a short line change to Line MCS32B will take place. Line MCS32B is expected to start at ~01:15 and continue until ~07:00 UTC. At which time a line change to MCS33 will take place. During this line change maintenance will be performed on Sub-Arrays 3 & 4 due to an airleak. Line MCS33 is expected to start at ~11:00 and continue until ~19:15 UTC. At that time the vessel will make another line change to MCS34. This line is expected to start at ~19:30 UTC and continue throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Fri 25. Nov 00:00	Fri 25. Nov 07:25	7.417
SOL Seq 34 MGL1610MCS30 FGSP=68997 Hdg=173.9° Prime EOL Seq 34 MGL1610MCS30 LGSP=69485 Complete EOL Water Depth=2257m				
Prime Line Change	AC_PLC	Fri 25. Nov 07:25	Fri 25. Nov 07:56	0.517
Nominal Prime line change.				
Production Prime	AC_PP	Fri 25. Nov 07:56	Fri 25. Nov 09:21	1.417
SOL Seq 35 MGL1610MCS31 FGSP=69979 Hdg=295.1° Prime EOL Seq 35 MGL1610MCS31 LGSP=70064 Incomplete SOL Water Depth=2380m				
Vessel	DT_VE	Fri 25. Nov 09:21	Fri 25. Nov 09:29	0.133
NTBP Seq 35 MCS31 FSP=70065 LSP=70071 Power down for Compressor Shutdown due to cooling water leak.				
Production Prime	AC_PP	Fri 25. Nov 09:29	Fri 25. Nov 13:03	3.567
SOL Seq 35 MGL1610MCS31 FGSP=70072 Hdg=295.1° Prime EOL Seq 35 MGL1610MCS31 LGSP=70305 Complete EOL Water Depth=6484m				
Prime Line Change	AC_PLC	Fri 25. Nov 13:03	Fri 25. Nov 13:16	0.217
Nominal Prime line change.				
Production Prime	AC_PP	Fri 25. Nov 13:16	Fri 25. Nov 14:00	0.733
SOL Seq 36 MGL1610MCS32 FGSP=70915 Hdg=350.6° Prime EOL Seq 36 MGL1610MCS32 LGSP=70972 Incomplete				
Cetacean	DT_CT	Fri 25. Nov 14:00	Fri 25. Nov 14:33	0.550
NTBP Seq 36 MCS32 FSP=70973 LSP=71006				
Production Prime	AC_PP	Fri 25. Nov 14:33	Fri 25. Nov 19:51	5.300
SOL Seq 36 MGL1610MCS32 FGSP=71007 Hdg=350.6° Prime EOL Seq 36 MGL1610MCS32 LGSP=713551 Complete EOL Water Depth=6878m				
Prime Line Change	AC_PLC	Fri 25. Nov 19:51	Fri 25. Nov 19:53	0.033
Nominal Prime line change.				
Production Prime	AC_PP	Fri 25. Nov 19:53	Fri 25. Nov 24:00	4.117
SOL Seq 37 MGL1610MCS32A FGSP=72003 Hdg=345.3° Prime MSP Seq 37 MGL1610MCS32A LGSP=72271 Midnight SOL Water Depth=6881m				



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Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

25-Nov	Hours	% Percent
Acquisition	23.317	97.153
Prime Line Change	0.767	3.194
Production Prime	22.550	93.958
DownTime	0.683	2.847
Cetacean	0.550	2.292
Vessel	0.133	0.556
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	14.034
Cetacean	1.033	0.123
Field Operations	21.667	2.579
Reconfiguration	8.883	1.058
Cable Reconfig	8.883	1.058
Transit	86.300	10.274
DownTime	28.150	3.351
Cetacean	13.567	1.615
Recording	10.317	1.228
Source	4.133	0.492
Vessel	0.133	0.016
Mobilisation	86.700	10.321
Deployment	31.817	3.788
Mob Ashore	43.350	5.161
Testing	6.000	0.714
Transit to Prospect	5.533	0.659
Acquisition	592.850	70.577
Infill Line Change	5.267	0.627
Prime Line Change	43.550	5.185
Production Prime	544.033	64.766
Demobilisation	14.417	1.716
Recovery	14.417	1.716
Total	840.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 25 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report



11/25/2016

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Daily Comment Summaries - Personnel Onboard

Fri 25 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



Prime Lines Completed



Preplot Lines	Complete	Incomplete	Pending
41	34	1	0

Percentages Charged

Prime	89.17% of 5021.72 km (Sail Line)
-------	----------------------------------

Average Daily Production

Average Accepted Daily Production	161.94 km
Average Charged Daily Production	159.92 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Fri 25 Nov	Marcus G Langseth	34 - 37	185.30
Total Production:			185.30

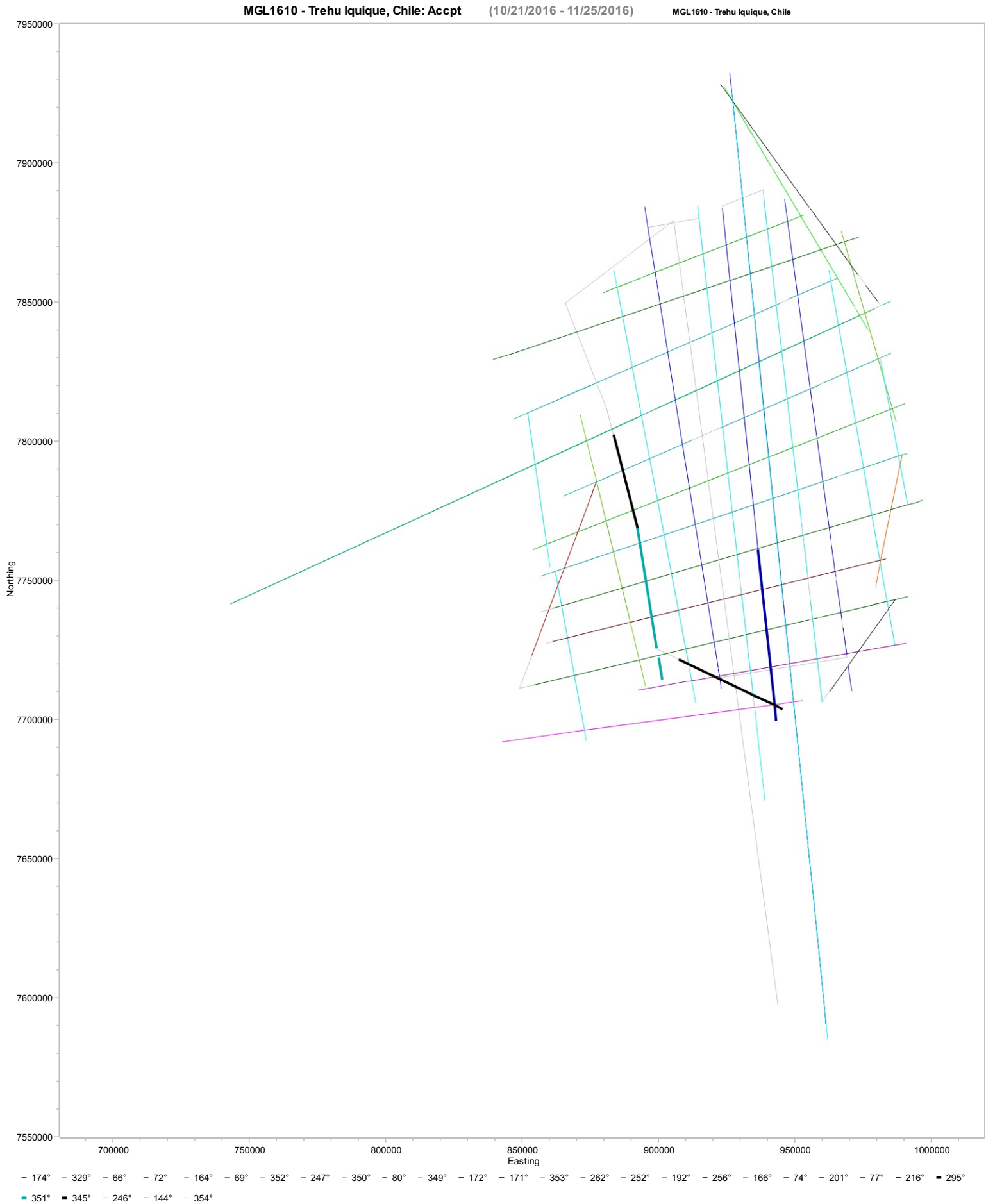
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	185.30	890.12	4038.80	4472.15
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	185.30	890.12	4044.53	4477.88
Total				
Prime	185.30	890.12	4038.80	4472.15
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	185.30	890.12	4044.53	4477.88



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Daily Science Report

11/26/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

The started the day continuing production on Line MCS32A. This line ended at 01:13 UTC and the vessel made a line change to Line MCS32B, which started at 01:15 UTC. Line MCS32B continued until 07:01 UTC at which time the vessel made a line change to MCS33. During this line change Sub-Arrays 3 & 4 were recovered to repair an air leak and preform maintenance. At 10:55 UTC production commenced on Line MCS33 and continued until 19:01 UTC. At that time a line change to Line MCS34 was started. Production on Line MCS34 started at 19:37 UTC and continued throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

The Vessel will start the day continuing production on Line MCS34. This will continue until ~05:30 UTC at which time Line MCS34 will be halted an the vessel will circle around to pickup some re-shoot shot points on Line MCS23. Once those Re-Shoot shot points have been acquired the vessel will resume production on Line MCS34 for the remainder of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Production Prime	AC_PP	Sat 26. Nov 00:00	Sat 26. Nov 01:13	1.217	
SOL Seq 37 MGL1610MCS32A FGSP=72272 Hdg=345.3° Prime EOL Seq 37 MGL1610MCS32A LGSP=72353 Complete EOL Water Depth=6696m					
Prime Line Change	AC_PLC	Sat 26. Nov 01:13	Sat 26. Nov 01:15	0.033	
Nominal Prime line change.					
Production Prime	AC_PP	Sat 26. Nov 01:15	Sat 26. Nov 07:01	5.767	
SOL Seq 38 MGL1610MCS32B FGSP=73003 Hdg=338° Prime EOL Seq 38 MGL1610MCS32B LGSP=73381 Complete EOL Water Depth=6224m					
Prime Line Change	AC_PLC	Sat 26. Nov 07:01	Sat 26. Nov 10:55	3.900	
Nominal Prime line change.					
Production Prime	AC_PP	Sat 26. Nov 10:55	Sat 26. Nov 19:01	8.100	
SOL Seq 39 MGL1610MCS33 FGSP=73944 Hdg=53.3° Prime EOL Seq 39 MGL1610MCS33 LGSP=74479 Complete					
Prime Line Change	AC_PLC	Sat 26. Nov 19:01	Sat 26. Nov 19:37	0.600	
Nominal Prime line change.					
Production Prime	AC_PP	Sat 26. Nov 19:37	Sat 26. Nov 24:00	4.383	
SOL Seq 40 MGL1610MCS34 FGSP=75031 Hdg=172.3° Prime MSP Seq 40 MGL1610MCS34 LGSP=75320 Midnight SOL Water Depth=1871m					

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Acquisition	24.000	100.000
Prime Line Change	4.533	18.889
Production Prime	19.467	81.111
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Chargeable Standby	117.883	13.644
Cetacean	1.033	0.120
Field Operations	21.667	2.508
Reconfiguration	8.883	1.028
Cable Reconfig	8.883	1.028
Transit	86.300	9.988
DownTime	28.150	3.258
Cetacean	13.567	1.570
Recording	10.317	1.194
Source	4.133	0.478



Vessel	0.133	0.015
Mobilisation	86.700	10.035
Deployment	31.817	3.682
Mob Ashore	43.350	5.017
Testing	6.000	0.694
Transit to Prospect	5.533	0.640
Acquisition	616.850	71.395
Infill Line Change	5.267	0.610
Prime Line Change	48.083	5.565
Production Prime	563.500	65.220
Demobilisation	14.417	1.669
Recovery	14.417	1.669
Total	864.000	

Daily Comment Summaries - Daily Comments On Status of Equipment**Navigation:**

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard**Technical Staff On-board the Langseth**

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student



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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged

92%

Prime Lines Completed

88%

42	37	0	0
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Prime	91.56% of 5065.57 km (Sail Line)
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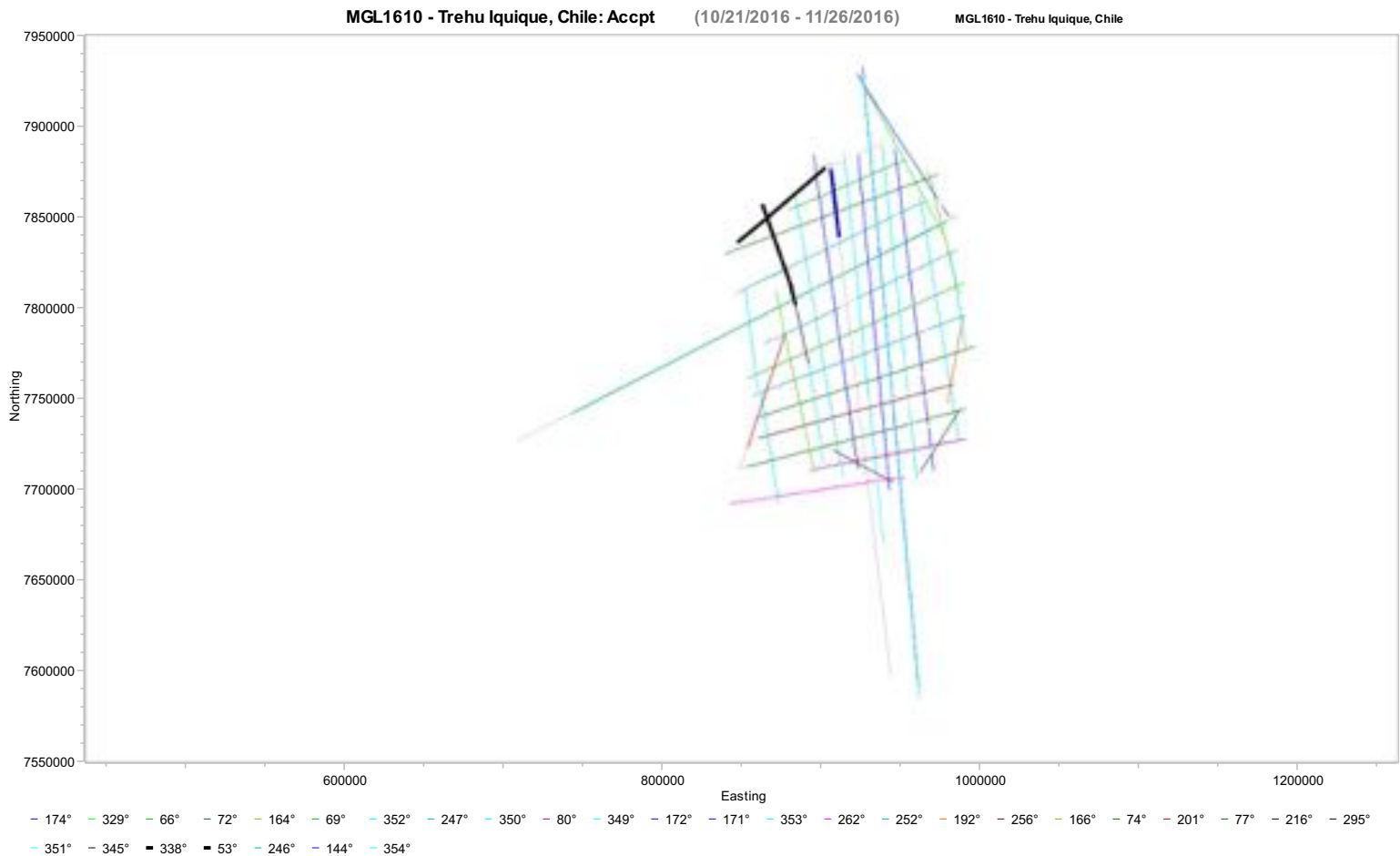
Average Accepted Daily Production	161.89 km
Average Charged Daily Production	159.94 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Sat 26 Nov	Marcus G Langseth	37 - 40	160.38
Total Production:			160.38

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Marcus G Langseth				
Prime	160.38	1050.50	4199.18	4632.53
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	160.38	1050.50	4204.90	4638.25
Total				
Prime	160.38	1050.50	4199.18	4632.53
Prime, Reshoot	0.00	0.00	5.73	5.73
Combined	160.38	1050.50	4204.90	4638.25





Daily Science Report

11/27/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sun 27 Nov

The Vessel started the day in production on MCS34. At 05:23 UTC the vessel broke off line MCS34 to circle around and pick up some re-shoot on MCS23. At 10:10 UTC the vessel started production on MCS23 and this continued until 12:56 UTC when all overlap and re-shoot was completed. The Vessel line changed back to MCS34A and production recommenced at 15:48 UTC. The vessel remained in production on line MCS34A thought the remainder of the day.

Daily Comment Summaries - Plan for Tomorrow

Sun 27 Nov

The Vessel will start the day in production on Line MCS34A. It is estimated that the vessel will end production on MCS34A at ~18:30 UTC. The vessel will then maneuver to start recovering of the towed equipment. It is hope that all towed equipment will be on before or shortly after the day change. As soon as all towed equipment is on-board the vessel will begin OBS recovery Operations.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 27. Nov 00:00	Sun 27. Nov 05:23	5.383
SOL Seq 40 MGL1610MCS34 FGSP=2597 FCSP=2597 Hdg=172.3° Prime EOL Seq 40 MGL1610MCS34 LGSP=4366 LCSP=4366 Complete EOL Water Depth=3443m				
Cetacean	DT_CT	Sun 27. Nov 05:23	Sun 27. Nov 10:01	4.633
Line Change to pickup Hole in Covreage due to PSO Sighting				
Production Infill	AC_PI	Sun 27. Nov 10:01	Sun 27. Nov 10:58	0.950
SOL Seq 41 MGL1610MCS23A FGSP=3294 FCSP=3294 Hdg=246.9° Infill EOL Seq 41 MGL1610MCS23A LGSP=2985 LCSP=2985 Complete				
Production Prime	AC_PP	Sun 27. Nov 10:58	Sun 27. Nov 12:23	1.417
SOL Seq 41 MGL1610MCS23A FGSP=2984 FCSP=2984 Hdg=246.9° Prime EOL Seq 41 MGL1610MCS23A LGSP=2524 LCSP=2524 Complete				
Production Infill	AC_PI	Sun 27. Nov 12:23	Sun 27. Nov 12:56	0.550
SOL Seq 41 MGL1610MCS23A FGSP=2523 FCSP=2523 Hdg=246.9° Infill EOL Seq 41 MGL1610MCS23A LGSP=2339 LCSP=2339 Complete				
Cetacean	DT_CT	Sun 27. Nov 12:56	Sun 27. Nov 15:48	2.867
Line Change to pickup Hole in Covreage due to PSO Sighting				
Production Infill	AC_PI	Sun 27. Nov 15:48	Sun 27. Nov 17:43	1.917
SOL Seq 42 MGL1610MCS34A FGSP=81548 Hdg=172.3° Infill EOL Seq 42 MGL1610MCS34A LGSP=81674 Complete SOL Water Depth=3892m				
Production Prime	AC_PP	Sun 27. Nov 17:43	Sun 27. Nov 24:00	6.283
SOL Seq 42 MGL1610MCS34A FGSP=81675 Hdg=172.3° Prime MSP Seq 42 MGL1610MCS34A LGSP=82087 Midnight				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

27-Nov	Hours	% Percent
Acquisition	16.500	68.750
Production Infill	3.417	14.236
Production Prime	13.083	54.514
DownTime	7.500	31.250
Cetacean	7.500	31.250
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	13.275
Cetacean	1.033	0.116
Field Operations	21.667	2.440
Reconfiguration	8.883	1.000
Cable Reconfig	8.883	1.000
Transit	86.300	9.718
DownTime	35.650	4.015
Cetacean	21.067	2.372



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Category	Hours	% Percent
Recording	10.317	1.162
Source	4.133	0.465
Vessel	0.133	0.015
Mobilisation	86.700	9.764
Deployment	31.817	3.583
Mob Ashore	43.350	4.882
Testing	6.000	0.676
Transit to Prospect	5.533	0.623
Acquisition	633.350	71.323
Prime Line Change	53.350	6.008
Production Infill	3.417	0.385
Production Prime	576.583	64.931
Demobilisation	14.417	1.623
Recovery	14.417	1.623
Total	888.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 27 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 27 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)



Preplot Lines	Complete	Incomplete	Pending
42	38	0	0

Percentages Charged	
Prime	93.68% of 5065.57 km (Sail Line)

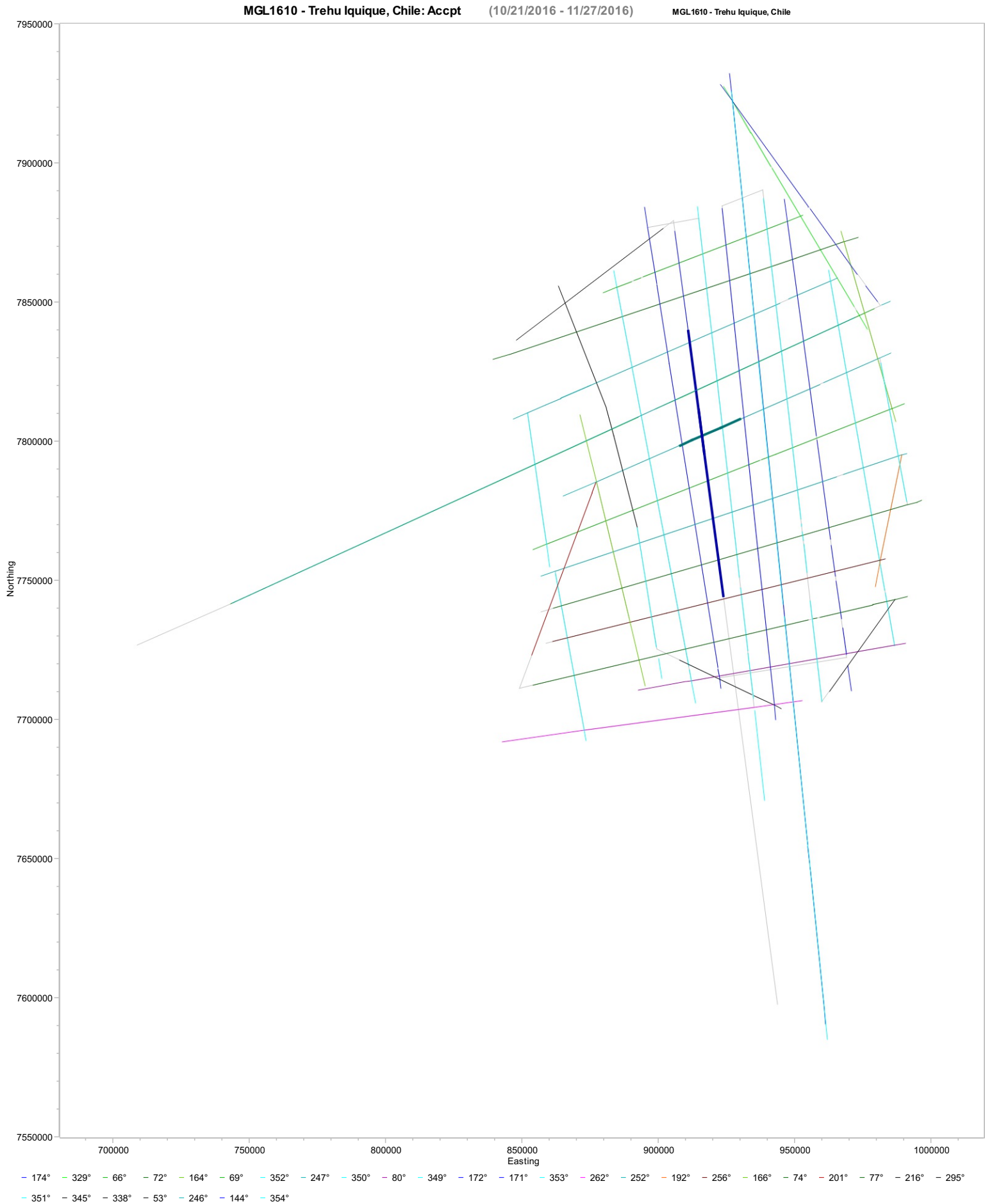
Average Daily Production	
Average Accepted Daily Production	160.07 km
Average Charged Daily Production	158.19 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Sun 27 Nov	Marcus G Langseth	40 - 42	107.35
Total Production:			107.35

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	95.85	1146.35	4295.03	4728.38
Infill	15.75	15.75	15.75	15.75
Infill, Reshoot	12.33	12.33	24.30	24.30
Prime, Reshoot	11.50	11.50	17.23	17.23
Combined	135.43	1185.92	4352.30	4785.65
Total				
Prime	95.85	1146.35	4295.03	4728.38
Infill	15.75	15.75	15.75	15.75
Infill, Reshoot	12.33	12.33	24.30	24.30
Prime, Reshoot	11.50	11.50	17.23	17.23
Combined	135.43	1185.92	4352.30	4785.65





Daily Science Report

11/28/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Mon 28 Nov

The vessel started the day continuing production on line MCS34 and at 18:34 UTC the line was completed. At this time recovery of all towed equipment began. The Source was on-board by 20:53 UTC and recovery of the streamer started continuing throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Mon 28 Nov

At the start of the day the vessel will continue Streamer recovery operations until ~00:30 UTC. The vessel will then move to OBS recovery Operations.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Mon 28. Nov 00:00	Mon 28. Nov 18:34	18.567
SOL Seq 42 MGL1610MCS34A FGSP=82087 Hdg=172.3° Prime EOL Seq 42 MGL1610MCS34A LGSP=83301 Complete EOL Water Depth=2539m				
Recovery	DM_RC	Mon 28. Nov 18:34	Mon 28. Nov 20:53	2.317
Recovery of Source				
Recovery	DM_RC	Mon 28. Nov 20:53	Mon 28. Nov 24:00	3.117
Recovery of Streamer				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

28-Nov	Hours	% Percent
Acquisition	18.567	77.361
Production Prime	18.567	77.361
Demobilisation	5.433	22.639
Recovery	5.433	22.639
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	117.883	12.926
Cetacean	1.033	0.113
Field Operations	21.667	2.376
Reconfiguration	8.883	0.974
Cable Reconfig	8.883	0.974
Transit	86.300	9.463
DownTime	35.650	3.909
Cetacean	21.067	2.310
Recording	10.317	1.131
Source	4.133	0.453
Vessel	0.133	0.015
Mobilisation	86.700	9.507
Deployment	31.817	3.489
Mob Ashore	43.350	4.753
Testing	6.000	0.658
Transit to Prospect	5.533	0.607
Acquisition	651.917	71.482
Prime Line Change	53.350	5.850
Production Infill	3.417	0.375
Production Prime	595.150	65.258
Demobilisation	19.850	2.177
Recovery	19.850	2.177
Total	912.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 28 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.



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Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:
No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Mon 28 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

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Josh Manger SIO/OBSIP Technician/engineer
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Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student



11/28/2016

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Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged



97%

Prime Lines Completed



90%

Preplot Lines	Complete	Incomplete	Pending
42	38	0	0

Percentages Charged	
Prime	96.68% of 5065.57 km (Sail Line)

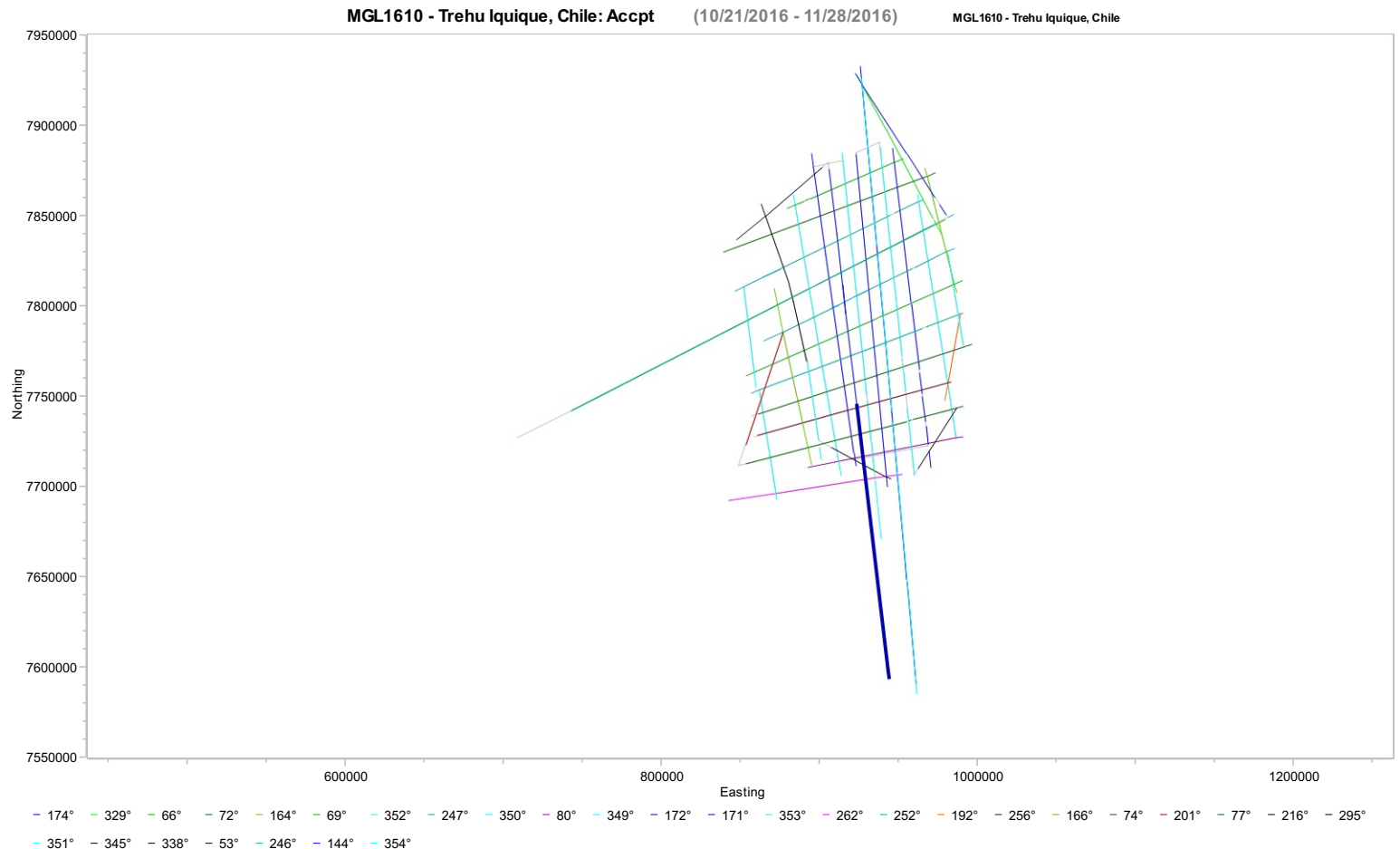
Average Daily Production	
Average Accepted Daily Production	159.80 km
Average Charged Daily Production	157.98 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Mon 28 Nov	Marcus G Langseth	42	151.75
Total Production:			151.75

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	151.75	151.75	4446.78	4880.13
Infill	0.00	0.00	15.75	15.75
Infill, Reshoot	0.00	0.00	24.30	24.30
Prime, Reshoot	0.00	0.00	17.23	17.23
Combined	151.75	151.75	4504.05	4937.40
Total				
Prime	151.75	151.75	4446.78	4880.13
Infill	0.00	0.00	15.75	15.75
Infill, Reshoot	0.00	0.00	24.30	24.30
Prime, Reshoot	0.00	0.00	17.23	17.23
Combined	151.75	151.75	4504.05	4937.40





Daily Science Report

11/29/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Tue 29 Nov

The Vessel started the day continuing the recovery of all towed equipment. This Operation was completed at 00:28 UTC. The vessel immediately moved in to OBS Recovery Operations, until 13:04 UTC after the recovery of OBS SS07. At that time the vessel started transiting to the wave glider's location to recover it, which took place at 19:51 UTC. Shortly after that the vessel put the Sonardyne Transducer over the side to retrieve the data from the Geodetic Site on the sea floor. This continued through out the day.

Daily Comment Summaries - Plan for Tomorrow

Tue 29 Nov

The Vessel will start the day continuing the data recovery from the Geodetic Site on the Sea Floor. Once that is completed and the vessel has recovered the Dunk Transducer, it will makes it way back to the survey grid and resume OBS recovery Operations.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Recovery	DM_RC	Tue 29. Nov 00:00	Tue 29. Nov 00:28	0.467
Recovery of Streamer				
Transit	SB_TRT	Tue 29. Nov 00:28	Tue 29. Nov 00:33	0.083
Transit to OBS SG01 Recovery Site.				
Recovery	DM_RC	Tue 29. Nov 00:33	Tue 29. Nov 02:05	1.533
Recovery of OBS SG01				
Transit	SB_TRT	Tue 29. Nov 02:05	Tue 29. Nov 03:04	0.983
Transit to OBS SG02 Recovery Site				
Recovery	DM_RC	Tue 29. Nov 03:04	Tue 29. Nov 03:52	0.800
Recovery of OBS SG02				
Transit	SB_TRT	Tue 29. Nov 03:52	Tue 29. Nov 04:41	0.817
Transit to OBS SG03 Recovery Site				
Recovery	DM_RC	Tue 29. Nov 04:41	Tue 29. Nov 05:28	0.783
Recovery of OBS SG03				
Transit	SB_TRT	Tue 29. Nov 05:28	Tue 29. Nov 06:19	0.850
Transit to OBS SS04 Recovery Site				
Recovery	DM_RC	Tue 29. Nov 06:19	Tue 29. Nov 07:32	1.217
Recovery of OBS SS04				
Transit	SB_TRT	Tue 29. Nov 07:32	Tue 29. Nov 08:17	0.750
Transit to OBS SS05 Recovery Site				
Recovery	DM_RC	Tue 29. Nov 08:17	Tue 29. Nov 09:16	0.983
Recovery of OBS SS05				
Transit	SB_TRT	Tue 29. Nov 09:16	Tue 29. Nov 10:16	1.000
Transit to OBS SS06 Recovery Site				
Recovery	DM_RC	Tue 29. Nov 10:16	Tue 29. Nov 11:22	1.100
Recovery of OBS SS06				
Transit	SB_TRT	Tue 29. Nov 11:22	Tue 29. Nov 12:05	0.717
Transit to OBS SS07 Recovery Site				
Recovery	DM_RC	Tue 29. Nov 12:05	Tue 29. Nov 13:04	0.983
Recovery of OBS SS07				
Transit	SB_TRT	Tue 29. Nov 13:04	Tue 29. Nov 19:15	6.183
Transit to Wave Glider location				
Recovery	DM_RC	Tue 29. Nov 19:15	Tue 29. Nov 19:51	0.600
Recovery of Wave Glider				
Field Operations	SB_FO	Tue 29. Nov 19:51	Tue 29. Nov 24:00	4.150
Sonardyne Dunk transducer over the side, collecting Data from Geodetic Site on Sea Floor.				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

29-Nov	Hours	% Percent
Chargeable Standby	15.533	64.722
Field Operations	4.150	17.292
Transit	11.383	47.431
Demobilisation	8.467	35.278



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29-Nov	Hours	% Percent
Recovery	8.467	35.278
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	133.417	14.254
Cetacean	1.033	0.110
Field Operations	25.817	2.758
Reconfiguration	8.883	0.949
Cable Reconfig	8.883	0.949
Transit	97.683	10.436
DownTime	35.650	3.809
Cetacean	21.067	2.251
Recording	10.317	1.102
Source	4.133	0.442
Vessel	0.133	0.014
Mobilisation	86.700	9.263
Deployment	31.817	3.399
Mob Ashore	43.350	4.631
Testing	6.000	0.641
Transit to Prospect	5.533	0.591
Acquisition	651.917	69.649
Prime Line Change	53.350	5.700
Production Infill	3.417	0.365
Production Prime	595.150	63.584
Demobilisation	28.317	3.025
Recovery	28.317	3.025
Total	936.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 29 Nov

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report



11/29/2016

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Daily Comment Summaries - Personnel Onboard

Tue 29 Nov

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged

97%

Prime Lines Completed

90%

Preplot Lines	Complete	Incomplete	Pending
42	38	0	0

Percentages Charged

Prime 96.68% of 5065.57 km (Sail Line)

Average Daily Production

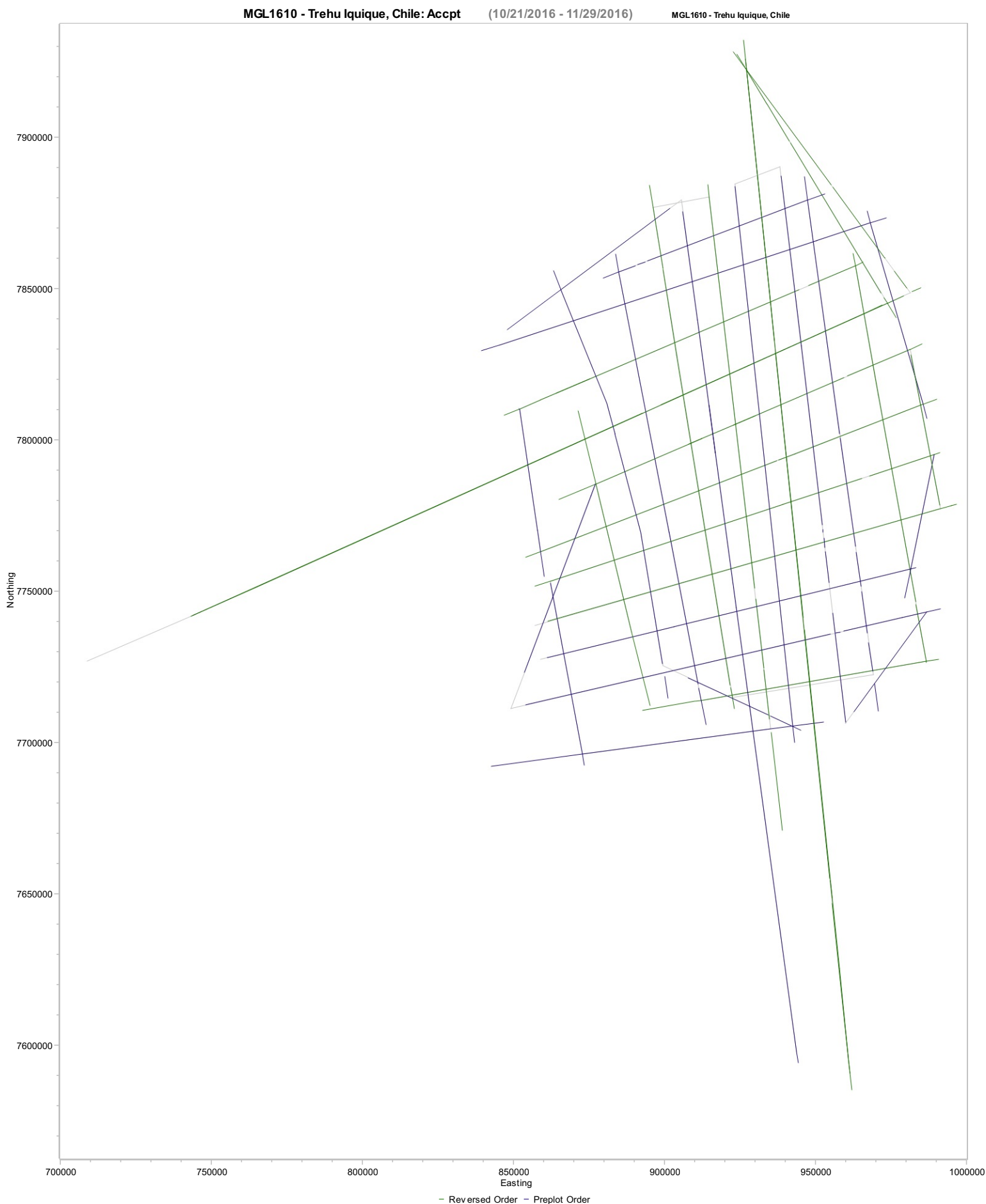
Average Accepted Daily Production	154.81 km
Average Charged Daily Production	153.04 km

Production Day By Day (Chgd km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
------	--------	-----------------------	------------

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	0.00	151.75	4446.78	4880.13
Infill	0.00	0.00	15.75	15.75
Infill, Reshoot	0.00	0.00	24.30	24.30
Prime, Reshoot	0.00	0.00	17.23	17.23
Combined	0.00	151.75	4504.05	4937.40
Total				
Prime	0.00	151.75	4446.78	4880.13
Infill	0.00	0.00	15.75	15.75
Infill, Reshoot	0.00	0.00	24.30	24.30
Prime, Reshoot	0.00	0.00	17.23	17.23
Combined	0.00	151.75	4504.05	4937.40





Daily Science Report

11/30/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

The Vessel started the day continuing the data recovery from the Geodetic Site. At 02:18 UTC Data recovery was completed and the vessel transited back to the next OBS Recovery Site. At 07:44 UTC OBS Recovery re-commenced and continued throughout the rest of the day.

During the transit to the Geodetic site the Magnetometer (S/N: 882679) was test again and was working fine. It seems that there is some interaction with the source sub-array that is causing the intermittent erratic readings. The Towing configuration of the Maggie will be adjusted on the next deployment.

Daily Comment Summaries - Plan for Tomorrow

The vessel will continue OBS recovery Operations throughout the day. At OBS Station SS10 - a Argo Float will be deployed.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Field Operations	SB_FO	Wed 30. Nov 00:00	Wed 30. Nov 02:18	2.300
Continue with Sonardyne Dunk transducer over the side, collecting Data from Geodetic Site on Sea Floor.				
Transit	SB_TRT	Wed 30. Nov 02:18	Wed 30. Nov 07:44	5.433
Transit back to OBS SS68 to begin retrieval.				
Recovery	DM_RC	Wed 30. Nov 07:44	Wed 30. Nov 09:17	1.550
Recovery of OBS SS68				
Transit	SB_TRT	Wed 30. Nov 09:17	Wed 30. Nov 10:04	0.783
Transit to OBS SS61				
Recovery	DM_RC	Wed 30. Nov 10:04	Wed 30. Nov 11:04	1.000
Recovery of OBS SS61				
Transit	SB_TRT	Wed 30. Nov 11:04	Wed 30. Nov 11:58	0.900
Transit to OBS SS08				
Recovery	DM_RC	Wed 30. Nov 11:58	Wed 30. Nov 13:09	1.183
Recovery of OBS SS08				
Transit	SB_TRT	Wed 30. Nov 13:09	Wed 30. Nov 14:06	0.950
Transit to OBS SS64				
Recovery	DM_RC	Wed 30. Nov 14:06	Wed 30. Nov 14:51	0.750
Recovery of OBS SS64				
Transit	SB_TRT	Wed 30. Nov 14:51	Wed 30. Nov 15:40	0.817
Transit to OBS SG63				
Recovery	DM_RC	Wed 30. Nov 15:40	Wed 30. Nov 16:08	0.467
Recovery of OBS SG63				
Transit	SB_TRT	Wed 30. Nov 16:08	Wed 30. Nov 16:58	0.833
Transit to OBS SG09				
Recovery	DM_RC	Wed 30. Nov 16:58	Wed 30. Nov 17:41	0.717
Recovery of OBS SG09				
Transit	SB_TRT	Wed 30. Nov 17:41	Wed 30. Nov 18:25	0.733
Transit to OBS SG62				
Recovery	DM_RC	Wed 30. Nov 18:25	Wed 30. Nov 19:30	1.083
Recovery of OBS SG62				
Transit	SB_TRT	Wed 30. Nov 19:30	Wed 30. Nov 20:15	0.750
Transit to OBS SS67				
Recovery	DM_RC	Wed 30. Nov 20:15	Wed 30. Nov 22:05	1.833
Recovery of OBS SS67				
Transit	SB_TRT	Wed 30. Nov 22:05	Wed 30. Nov 22:45	0.667
Transit to OBS SS55				
Recovery	DM_RC	Wed 30. Nov 22:45	Wed 30. Nov 24:00	1.250
Recovery of OBS SS55				



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Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Chargeable Standby	14.167	59.028
Field Operations	2.300	9.583
Transit	11.867	49.444
Demobilisation	9.833	40.972
Recovery	9.833	40.972
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Chargeable Standby	147.583	15.373
Cetacean	1.033	0.108
Field Operations	28.117	2.929
Reconfiguration	8.883	0.925
Cable Reconfig	8.883	0.925
Transit	109.550	11.411
DownTime	35.650	3.714
Cetacean	21.067	2.194
Recording	10.317	1.075
Source	4.133	0.431
Vessel	0.133	0.014
Mobilisation	86.700	9.031
Deployment	31.817	3.314
Mob Ashore	43.350	4.516
Testing	6.000	0.625
Transit to Prospect	5.533	0.576
Acquisition	651.917	67.908
Prime Line Change	53.350	5.557
Production Infill	3.417	0.356
Production Prime	595.150	61.995
Demobilisation	38.150	3.974
Recovery	38.150	3.974
Total	960.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report



Daily Comment Summaries - Personnel Onboard

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

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Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

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Josh Manger SIO/OBSIP Technician/engineer
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Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez RojasUn. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged

97%

Prime Lines Completed

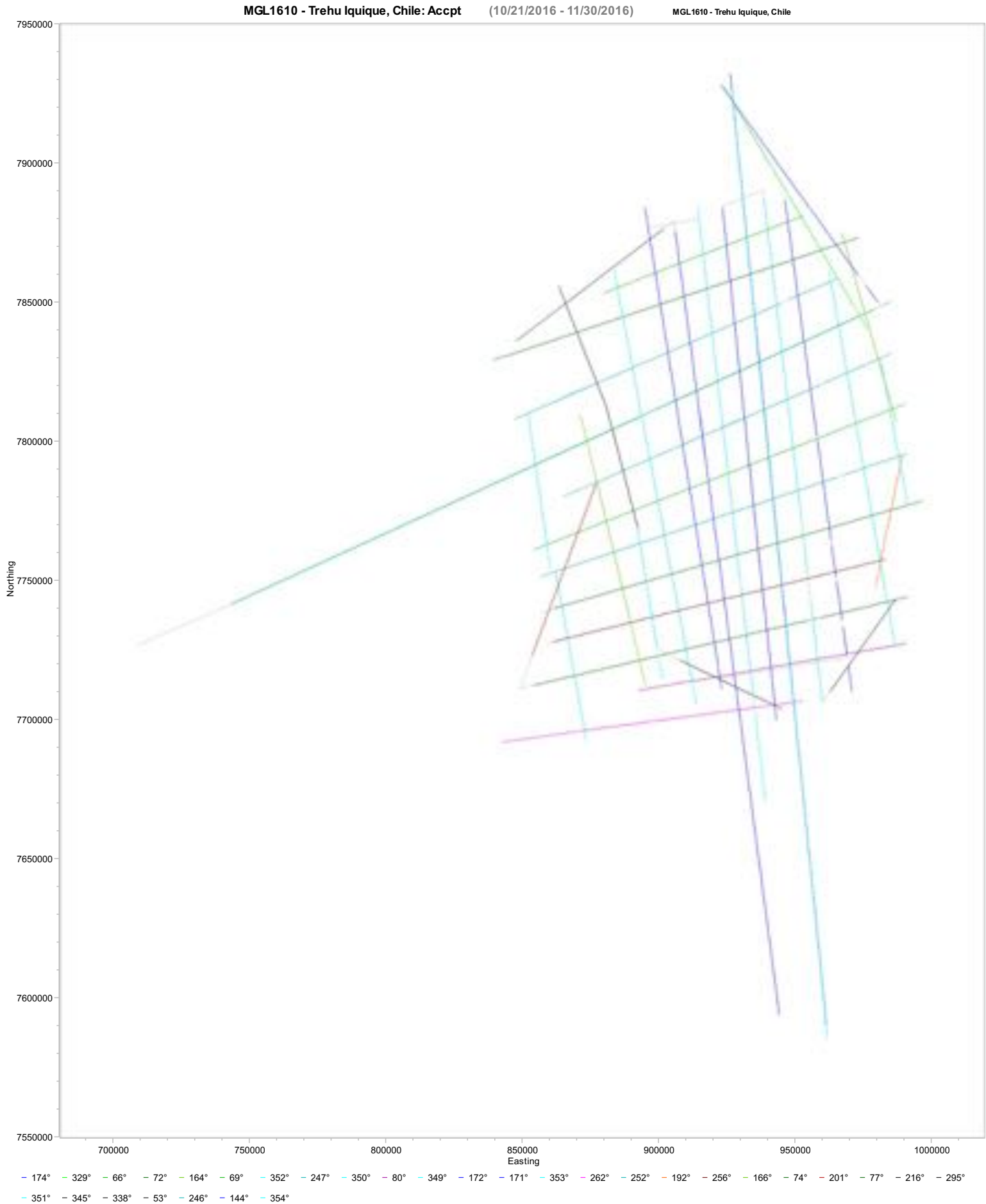
90%

42	38	0	0
Prime	96.68% of 5065.57 km (Sail Line)		
Average Accepted Daily Production	150.12 km		
Average Charged Daily Production	148.40 km		

Production Day By Day (Chgd km) - Prime: Sail Line, Infill: Full Fold

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Marcus G Langseth				
Prime	0.00	151.75	4446.78	4880.13
Infill	0.00	0.00	15.75	15.75
Infill, Reshoot	0.00	0.00	24.30	24.30
Prime, Reshoot	0.00	0.00	17.23	17.23
Combined	0.00	151.75	4504.05	4937.40
Total				
Prime	0.00	151.75	4446.78	4880.13
Infill	0.00	0.00	15.75	15.75
Infill, Reshoot	0.00	0.00	24.30	24.30
Prime, Reshoot	0.00	0.00	17.23	17.23
Combined	0.00	151.75	4504.05	4937.40





Daily Science Report

12/1/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

The vessel will continue OBS recovery Operations throughout the day. At OBS Station SS10 an Argo Float was deployed.

Daily Comment Summaries - Plan for Tomorrow

The vessel will continue OBS recovery Operations throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Recovery	DM_RC	Thu 1. Dec 00:00	Thu 1. Dec 00:30	0.500
Recovery of OBS SS55				
Transit	SB_TRT	Thu 1. Dec 00:30	Thu 1. Dec 01:10	0.667
Transit to OBS SS59				
Recovery	DM_RC	Thu 1. Dec 01:10	Thu 1. Dec 02:52	1.700
Recovery of OBS SS59				
Transit	SB_TRT	Thu 1. Dec 02:52	Thu 1. Dec 03:55	1.050
Transit to OBS SS10				
Recovery	DM_RC	Thu 1. Dec 03:55	Thu 1. Dec 04:47	0.867
Recovery OBS SS10				
Transit	SB_TRT	Thu 1. Dec 04:47	Thu 1. Dec 05:54	1.117
Transit to OBS SS60				
Recovery	DM_RC	Thu 1. Dec 05:54	Thu 1. Dec 06:43	0.817
Recovery OBS SS60				
Transit	SB_TRT	Thu 1. Dec 06:43	Thu 1. Dec 07:59	1.267
Transit to OBS SS58				
Recovery	DM_RC	Thu 1. Dec 07:59	Thu 1. Dec 08:49	0.833
Recovery of OBS SS58				
Transit	SB_TRT	Thu 1. Dec 08:49	Thu 1. Dec 09:32	0.717
Transit to OBS SS57				
Recovery	DM_RC	Thu 1. Dec 09:32	Thu 1. Dec 10:14	0.700
Recovery of OBS SS57				
Transit	SB_TRT	Thu 1. Dec 10:14	Thu 1. Dec 11:17	1.050
Transit to OBS SS11				
Recovery	DM_RC	Thu 1. Dec 11:17	Thu 1. Dec 12:20	1.050
Recovery of OBS SS11				
Transit	SB_TRT	Thu 1. Dec 12:20	Thu 1. Dec 13:00	0.667
Transit to OBS SG56				
Recovery	DM_RC	Thu 1. Dec 13:00	Thu 1. Dec 13:53	0.883
Recovery of OBS SG56				
Transit	SB_TRT	Thu 1. Dec 13:53	Thu 1. Dec 14:44	0.850
Transit to OBS SS51				
Recovery	DM_RC	Thu 1. Dec 14:44	Thu 1. Dec 16:23	1.650
Recovery of OBS SS51				
Transit	SB_TRT	Thu 1. Dec 16:23	Thu 1. Dec 16:48	0.417
Transit to OBS SG46				
Recovery	DM_RC	Thu 1. Dec 16:48	Thu 1. Dec 17:56	1.133
Recovery of OBS SG46				
Transit	SB_TRT	Thu 1. Dec 17:56	Thu 1. Dec 18:14	0.300
Transit to OBS SG47				
Recovery	DM_RC	Thu 1. Dec 18:14	Thu 1. Dec 19:22	1.133
Recovery of OBS SG47				
Transit	SB_TRT	Thu 1. Dec 19:22	Thu 1. Dec 20:21	0.983
Transit to OBS SS48				
Recovery	DM_RC	Thu 1. Dec 20:21	Thu 1. Dec 21:33	1.200
Recovery of OBS SS48				



Daily Science Report

12/1/2016

Page 2

 Transit	SB_TRT	Thu 1. Dec 21:33	Thu 1. Dec 22:18	0.750
Transit to OBS SS52				
 Recovery	DM_RC	Thu 1. Dec 22:18	Thu 1. Dec 23:33	1.250
Recovery of OBS SS52				
 Transit	SB_TRT	Thu 1. Dec 23:33	Thu 1. Dec 24:00	0.450
Transit to OBS SS12				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Chargeable Standby		10.283	42.847
Transit		10.283	42.847
Demobilisation		13.717	57.153
Recovery		13.717	57.153
Day's Total		24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Chargeable Standby		157.867	16.043
Cetacean		1.033	0.105
Field Operations		28.117	2.857
Reconfiguration		8.883	0.903
Cable Reconfig		8.883	0.903
Transit		119.833	12.178
DownTime		35.650	3.623
Cetacean		21.067	2.141
Recording		10.317	1.048
Source		4.133	0.420
Vessel		0.133	0.014
Mobilisation		86.700	8.811
Deployment		31.817	3.233
Mob Ashore		43.350	4.405
Testing		6.000	0.610
Transit to Prospect		5.533	0.562
Acquisition		651.917	66.252
Prime Line Change		53.350	5.422
Production Infill		3.417	0.347
Production Prime		595.150	60.483
Demobilisation		51.867	5.271
Recovery		51.867	5.271
Total		984.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Magnetometer (S/N: 882402) confirm good and is currently deployed. Magnetometer (S/N: 882679) is confirmed to have erratic readings and will be shipped for repair during the next port call.

Miscellaneous:

No Major Issues to Report



12/1/2016

Page 3

Daily Comment Summaries - Personnel Onboard

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth


Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

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Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez RojasUn. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged

 97%

Prime Lines Completed

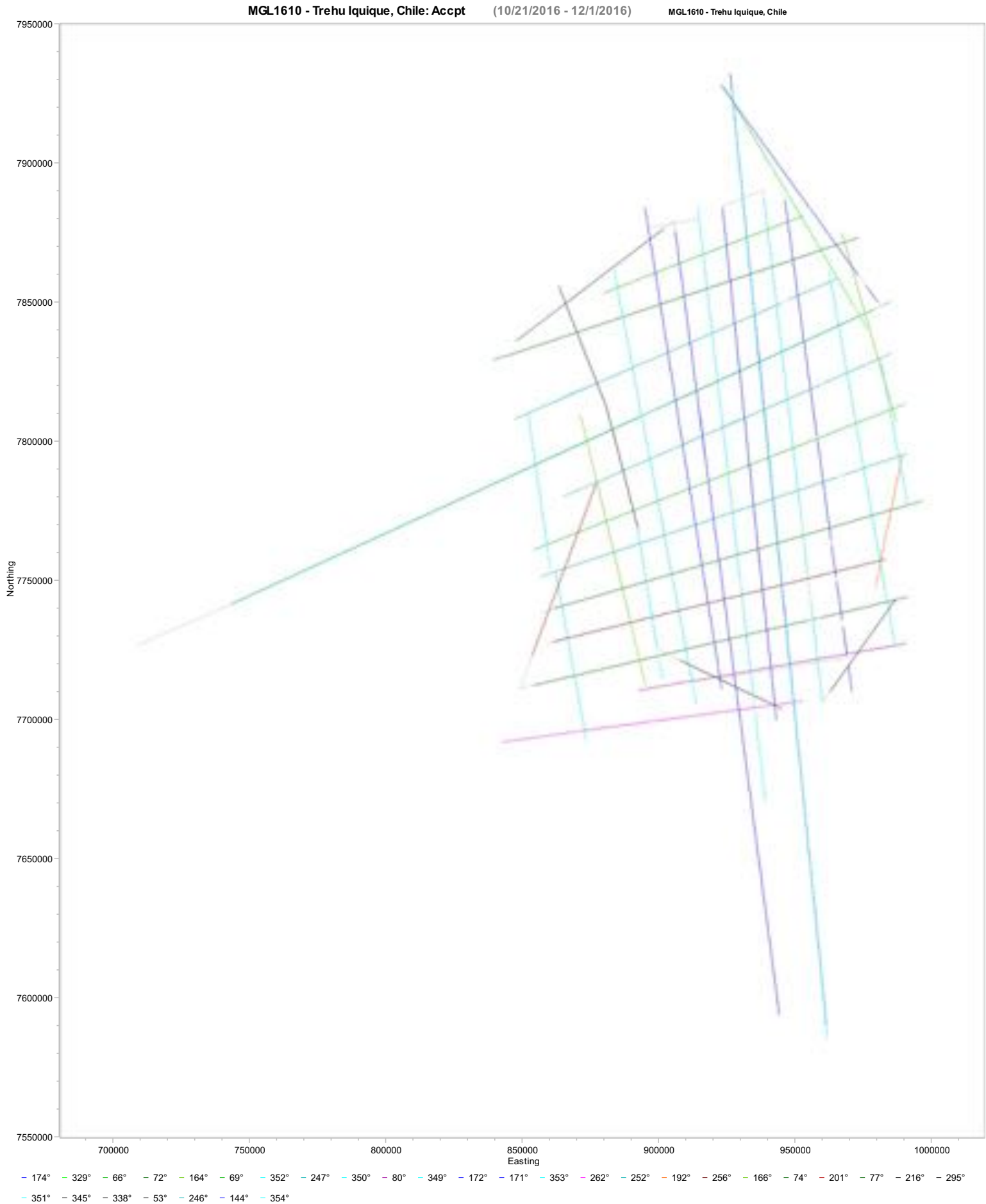
 90%

42	38	0	0
Prime	96.68% of 5065.57 km (Sail Line)		
Average Accepted Daily Production	145.70 km		
Average Charged Daily Production	144.04 km		

Production Day By Day (Chgd km) - Prime: Sail Line, Infill: Full Fold

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Marcus G Langseth				
Prime	0.00	151.75	0.00	4880.13
Infill	0.00	0.00	0.00	15.75
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	0.00	151.75	0.00	4937.40
Total				
Prime	0.00	151.75	0.00	4880.13
Infill	0.00	0.00	0.00	15.75
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	0.00	151.75	0.00	4937.40





Daily Science Report

12/2/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

The vessel continued OBS recovery Operations throughout the day.

Daily Comment Summaries - Plan for Tomorrow

The vessel will continue OBS recovery Operations throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Transit	SB_TRT	Fri 2. Dec 00:00	Fri 2. Dec 00:37	0.617
Transit to OBS SS12				
Recovery	DM_RC	Fri 2. Dec 00:37	Fri 2. Dec 01:44	1.117
Recovery of OBS SS12				
Transit	SB_TRT	Fri 2. Dec 01:44	Fri 2. Dec 02:55	1.183
Transit to OBS SS53				
Recovery	DM_RC	Fri 2. Dec 02:55	Fri 2. Dec 03:43	0.800
Recovery of OBS SS53				
Transit	SB_TRT	Fri 2. Dec 03:43	Fri 2. Dec 04:34	0.850
Transit to OBS SS54				
Recovery	DM_RC	Fri 2. Dec 04:34	Fri 2. Dec 06:09	1.583
Recovery of OBS SS54				
Transit	SB_TRT	Fri 2. Dec 06:09	Fri 2. Dec 07:00	0.850
Transit to OBS SS50				
Recovery	DM_RC	Fri 2. Dec 07:00	Fri 2. Dec 07:38	0.633
Recovery of OBS SS50				
Transit	SB_TRT	Fri 2. Dec 07:38	Fri 2. Dec 08:25	0.783
Transit to OBS SS49				
Recovery	DM_RC	Fri 2. Dec 08:25	Fri 2. Dec 09:09	0.733
Recovery of OBS SS49				
Transit	SB_TRT	Fri 2. Dec 09:09	Fri 2. Dec 10:00	0.850
Transit to OBS SG13				
Recovery	DM_RC	Fri 2. Dec 10:00	Fri 2. Dec 10:35	0.583
Recovery of OBS SG13				
Transit	SB_TRT	Fri 2. Dec 10:35	Fri 2. Dec 11:34	0.983
Transit to OBS SG14				
Recovery	DM_RC	Fri 2. Dec 11:34	Fri 2. Dec 12:03	0.483
Recovery of OBS SG14				
Transit	SB_TRT	Fri 2. Dec 12:03	Fri 2. Dec 13:09	1.100
Transit to OBS SG44				
Recovery	DM_RC	Fri 2. Dec 13:09	Fri 2. Dec 13:27	0.300
Recovery of OBS SG44				
Transit	SB_TRT	Fri 2. Dec 13:27	Fri 2. Dec 14:15	0.800
Transit to OBS SS45				
Recovery	DM_RC	Fri 2. Dec 14:15	Fri 2. Dec 15:08	0.883
Recovery of OBS SS45				
Transit	SB_TRT	Fri 2. Dec 15:08	Fri 2. Dec 16:22	1.233
Transit to OBS SS34				
Recovery	DM_RC	Fri 2. Dec 16:22	Fri 2. Dec 17:02	0.667
Recovery of OBS SS34				
Transit	SB_TRT	Fri 2. Dec 17:02	Fri 2. Dec 17:54	0.867
Transit to OBS SS33				
Recovery	DM_RC	Fri 2. Dec 17:54	Fri 2. Dec 18:31	0.617
Recovery of OBS SS31				
Transit	SB_TRT	Fri 2. Dec 18:31	Fri 2. Dec 19:22	0.850
Transit to OBS SS32				



Daily Science Report

12/2/2016

Page 2

Recovery	DM_RC	Fri 2. Dec 19:22	Fri 2. Dec 19:54	0.533
Recovery OBS SS32				
Transit	SB_TRT	Fri 2. Dec 19:54	Fri 2. Dec 20:35	0.683
Transit to OBS SG15				
Recovery	DM_RC	Fri 2. Dec 20:35	Fri 2. Dec 21:09	0.567
Recovery of OBS SG15				
Transit	SB_TRT	Fri 2. Dec 21:09	Fri 2. Dec 21:57	0.800
Transit to OBS SS16				
Recovery	DM_RC	Fri 2. Dec 21:57	Fri 2. Dec 22:42	0.750
Recovery of OBS SS16				
Transit	SB_TRT	Fri 2. Dec 22:42	Fri 2. Dec 23:39	0.950
Transit to OBS SS40				
Recovery	DM_RC	Fri 2. Dec 23:39	Fri 2. Dec 24:00	0.350
Recovery of OBS SS40				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Chargeable Standby	13.400	55.833
Transit	13.400	55.833
Demobilisation	10.600	44.167
Recovery	10.600	44.167
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Chargeable Standby	171.267	16.991
Cetacean	1.033	0.103
Field Operations	28.117	2.789
Reconfiguration	8.883	0.881
Cable Reconfig	8.883	0.881
Transit	133.233	13.218
DownTime	35.650	3.537
Cetacean	21.067	2.090
Recording	10.317	1.023
Source	4.133	0.410
Vessel	0.133	0.013
Mobilisation	86.700	8.601
Deployment	31.817	3.156
Mob Ashore	43.350	4.301
Testing	6.000	0.595
Transit to Prospect	5.533	0.549
Acquisition	651.917	64.674
Prime Line Change	53.350	5.293
Production Infill	3.417	0.339
Production Prime	595.150	59.043
Demobilisation	62.467	6.197
Recovery	62.467	6.197
Total	1008.000	



12/2/2016

Page 3

Daily Comment Summaries - Daily Comments On Status of Equipment**Navigation:**

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard**Technical Staff On-board the Langseth**

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan HandelFree Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged

 97%

Prime Lines Completed

 90%

42	38	0	0
Prime	96.68% of 5065.57 km (Sail Line)		
Average Accepted Daily Production	141.54 km		
Average Charged Daily Production	139.92 km		

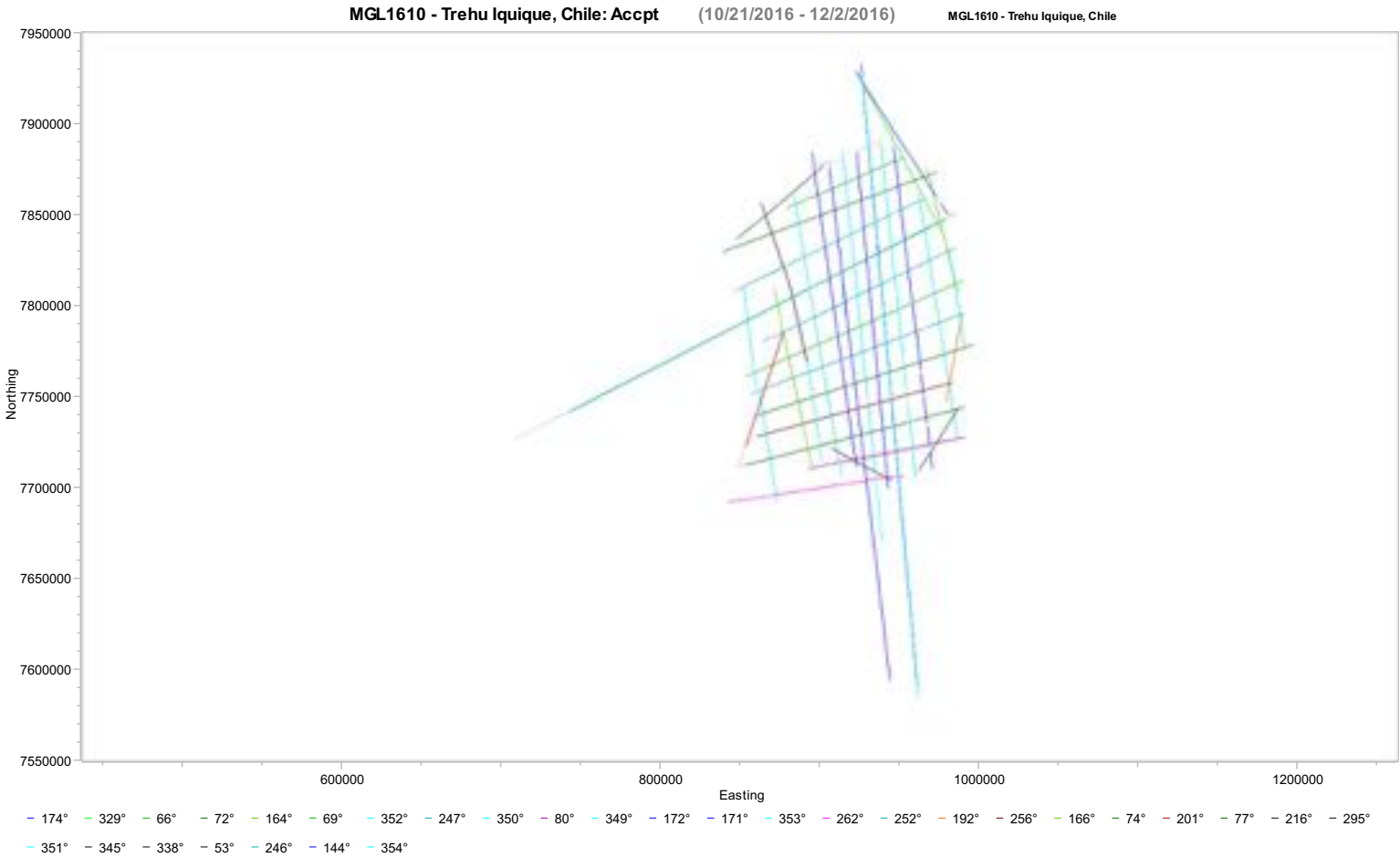


Production Day By Day (Chgd km) - Prime: Sail Line, Infill: Full Fold

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Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Marcus G Langseth				
Prime	0.00	151.75	0.00	4880.13
Infill	0.00	0.00	0.00	15.75
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	0.00	151.75	0.00	4937.40
Total				
Prime	0.00	151.75	0.00	4880.13
Infill	0.00	0.00	0.00	15.75
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	0.00	151.75	0.00	4937.40





Daily Science Report

12/3/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sat 03 Dec

The vessel continued OBS recovery Operations throughout the day.

Daily Comment Summaries - Plan for Tomorrow

Sat 03 Dec

The vessel will continue OBS recovery Operations throughout the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Recovery	DM_RC	Sat 3. Dec 00:00	Sat 3. Dec 00:14	0.233
Recovery of OBS SS40				
Transit	SB_TRT	Sat 3. Dec 00:14	Sat 3. Dec 01:05	0.850
Transit to OBS SS41				
Recovery	DM_RC	Sat 3. Dec 01:05	Sat 3. Dec 01:38	0.550
Recovery of OBS SS41				
Transit	SB_TRT	Sat 3. Dec 01:38	Sat 3. Dec 02:32	0.900
Transit to OBS SS37				
Recovery	DM_RC	Sat 3. Dec 02:32	Sat 3. Dec 03:13	0.683
Recovery of OBS SS37				
Transit	SB_TRT	Sat 3. Dec 03:13	Sat 3. Dec 05:29	2.267
Transit to OBS SS20				
Recovery	DM_RC	Sat 3. Dec 05:29	Sat 3. Dec 06:18	0.817
Recovery OBS SS20				
Transit	SB_TRT	Sat 3. Dec 06:18	Sat 3. Dec 07:07	0.817
Transit to OBS SS19				
Recovery	DM_RC	Sat 3. Dec 07:07	Sat 3. Dec 07:54	0.783
Recovery of OBS SS19				
Transit	SB_TRT	Sat 3. Dec 07:54	Sat 3. Dec 08:53	0.983
Transit to OBS SS18				
Recovery	DM_RC	Sat 3. Dec 08:53	Sat 3. Dec 09:42	0.817
Recovery of OBS SS18				
Transit	SB_TRT	Sat 3. Dec 09:42	Sat 3. Dec 10:26	0.733
Transit to OBS SS17				
Recovery	DM_RC	Sat 3. Dec 10:26	Sat 3. Dec 11:03	0.617
Recovery of OBS SS17				
Transit	SB_TRT	Sat 3. Dec 11:03	Sat 3. Dec 11:56	0.883
Transit to OBS SS36				
Recovery	DM_RC	Sat 3. Dec 11:56	Sat 3. Dec 12:43	0.783
Recovery of OBS SS36				
Transit	SB_TRT	Sat 3. Dec 12:43	Sat 3. Dec 13:44	1.017
Transit to OBS SS35				
Recovery	DM_RC	Sat 3. Dec 13:44	Sat 3. Dec 15:41	1.950
Recovery of OBS SS35				
Transit	SB_TRT	Sat 3. Dec 15:41	Sat 3. Dec 16:35	0.900
Transit to OBS SS38				
Recovery	DM_RC	Sat 3. Dec 16:35	Sat 3. Dec 18:13	1.633
Recovery of OBS 38				
Transit	SB_TRT	Sat 3. Dec 18:13	Sat 3. Dec 19:14	1.017
Transit to OBS SS39				
Recovery	DM_RC	Sat 3. Dec 19:14	Sat 3. Dec 20:20	1.100
Recovery of OBS SS39				
Transit	SB_TRT	Sat 3. Dec 20:20	Sat 3. Dec 20:46	0.433
Transit to OBS SG31				
Recovery	DM_RC	Sat 3. Dec 20:46	Sat 3. Dec 21:33	0.783
Recovery of OBS SG31				



Daily Science Report

12/3/2016

Page 2

Category	Code	Start	End	Duration
 Transit	SB_TRT	Sat 3. Dec 21:33	Sat 3. Dec 22:28	0.917
Transit to OBS SS30				
 Recovery	DM_RC	Sat 3. Dec 22:28	Sat 3. Dec 24:00	1.533
Recovery of OBS SS30				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

3-Dec	Hours	% Percent
Chargeable Standby	11.717	48.819
Transit	11.717	48.819
Demobilisation	12.283	51.181
Recovery	12.283	51.181
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	182.983	17.731
Cetacean	1.033	0.100
Field Operations	28.117	2.724
Reconfiguration	8.883	0.861
Cable Reconfig	8.883	0.861
Transit	144.950	14.046
DownTime	35.650	3.454
Cetacean	21.067	2.041
Recording	10.317	1.000
Source	4.133	0.401
Vessel	0.133	0.013
Mobilisation	86.700	8.401
Deployment	31.817	3.083
Mob Ashore	43.350	4.201
Testing	6.000	0.581
Transit to Prospect	5.533	0.536
Acquisition	651.917	63.170
Prime Line Change	53.350	5.170
Production Infill	3.417	0.331
Production Prime	595.150	57.670
Demobilisation	74.750	7.243
Recovery	74.750	7.243
Total	1032.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 03 Dec

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report



12/3/2016

Page 3

Daily Comment Summaries - Personnel Onboard

Sat 03 Dec

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

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Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged

97%

Prime Lines Completed

90%

Preplot Lines	Complete	Incomplete	Pending
42	38	0	0

Percentages Charged

Prime 96.68% of 5065.57 km (Sail Line)

Average Daily Production

Average Accepted Daily Production 137.61 km

Average Charged Daily Production 136.04 km

Production Day By Day (Chgd km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
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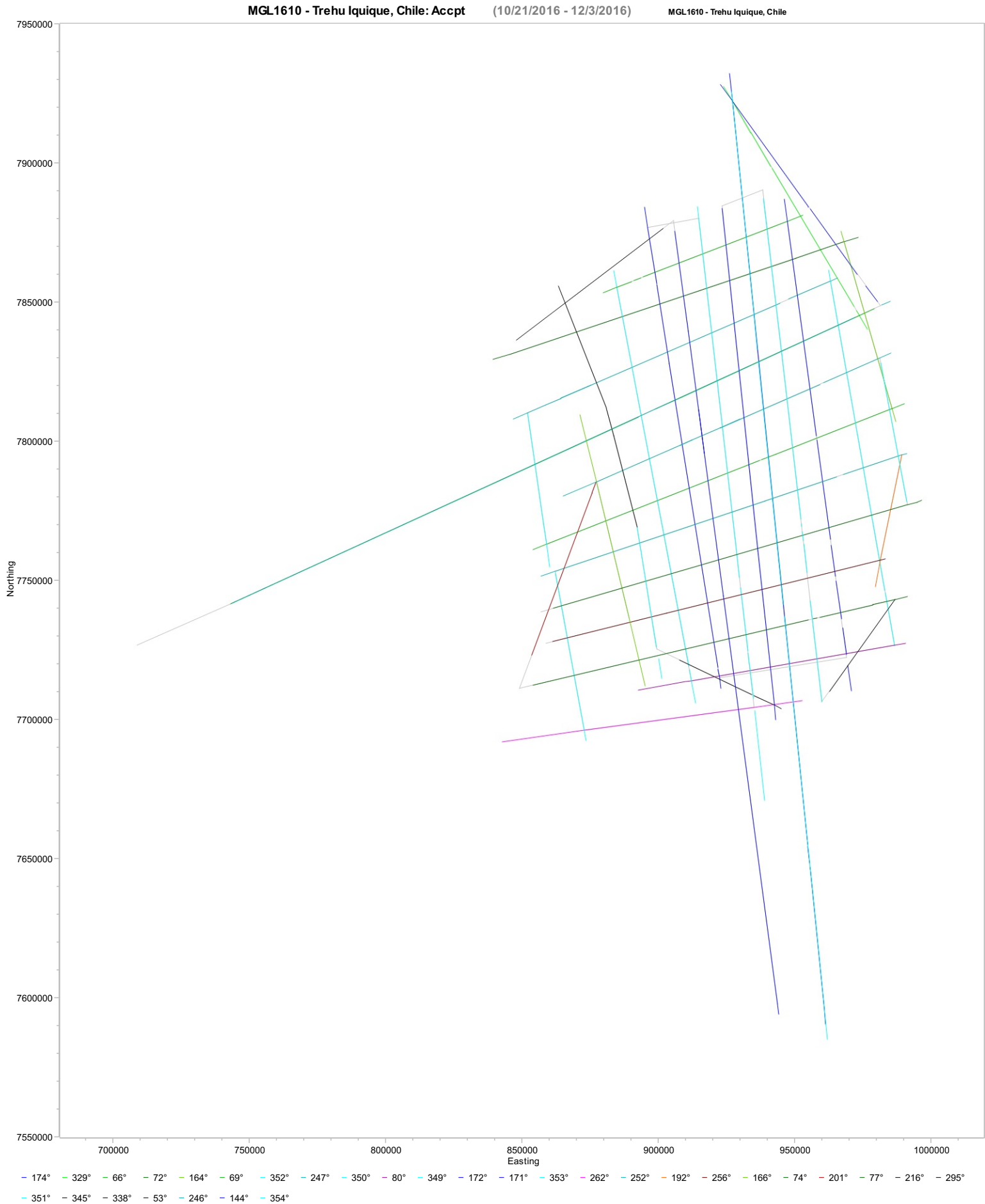
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	0.00	151.75	0.00	4880.13
Infill	0.00	0.00	0.00	15.75
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	0.00	151.75	0.00	4937.40
Total				
Prime	0.00	151.75	0.00	4880.13
Infill	0.00	0.00	0.00	15.75
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	0.00	151.75	0.00	4937.40



12/3/2016

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Daily Science Report

12/4/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Sun 04 Dec

The vessel start the day continuing OBS recovery Operations. At 22:06 UTC OBS recovery operations were suspended with OBS SS21 - SS26 (6) still on the sea floor. The vessel began transit back down Line OBS01 to the west. This continued throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Sun 04 Dec

The Vessel will start the day continuing it's transit back down Line OBS01 to the west. At ~05:30 UTC the vessel will slow down and start deploying the source sub-array. It is hoped that it is out by ~06:30 UTC and the vessel will then conduct a Magnetometer Calibration figure eight on the west end of Line OBS01. This calibration is expected to conclude at ~09:30 UTC. At ~10:00 UTC once the safety radius has been cleared by the PSO's the vessel will start ramping up the source. It is hoped that at ~10:30 UTC the vessel will begin production on the extended Run-out to Line OBS01 to the west. This extra run out is ~20 nm and should be concluded at ~15:00 UTC. The vessel will then recovery the source by ~16:00 UTC and start its transit back to OBS21 to resume OBS recovery operation at ~18:30 UTC. The vessel should continue OBS Recovery operations throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)



Category	Code	Start	End	Duration
Recovery	DM_RC	Sun 4. Dec 00:00	Sun 4. Dec 00:21	0.350
Recovery of OBS SS30				
Transit	SB_TRT	Sun 4. Dec 00:21	Sun 4. Dec 01:10	0.817
Transit to OBS SD65				
Recovery	DM_RC	Sun 4. Dec 01:10	Sun 4. Dec 02:50	1.667
Recovery of OBS SD65				
Transit	SB_TRT	Sun 4. Dec 02:50	Sun 4. Dec 03:03	0.217
Transit to OBS SD28				
Recovery	DM_RC	Sun 4. Dec 03:03	Sun 4. Dec 05:34	2.517
Recovery of OBS SD28				
Transit	SB_TRT	Sun 4. Dec 05:34	Sun 4. Dec 05:58	0.400
Transit to OBS SD66				
Recovery	DM_RC	Sun 4. Dec 05:58	Sun 4. Dec 08:07	2.150
Recovery of OBS SD66				
Transit	SB_TRT	Sun 4. Dec 08:07	Sun 4. Dec 10:03	1.933
Transit to OBS SS43				
Recovery	DM_RC	Sun 4. Dec 10:03	Sun 4. Dec 11:13	1.167
Recovery of OBS SS43				
Transit	SB_TRT	Sun 4. Dec 11:13	Sun 4. Dec 12:08	0.917
Transit to OBS SS42				
Recovery	DM_RC	Sun 4. Dec 12:08	Sun 4. Dec 13:46	1.633
Recovery of OBS SS42				
Transit	SB_TRT	Sun 4. Dec 13:46	Sun 4. Dec 14:45	0.983
Transit to OBS SS29				
Recovery	DM_RC	Sun 4. Dec 14:45	Sun 4. Dec 16:40	1.917
Recovery of OBS SS29				
Transit	SB_TRT	Sun 4. Dec 16:40	Sun 4. Dec 17:55	1.250
Transit to OBS SG27B				
Recovery	DM_RC	Sun 4. Dec 17:55	Sun 4. Dec 19:45	1.833
Recovery of OBS SG27B				
Transit	SB_TRT	Sun 4. Dec 19:45	Sun 4. Dec 20:25	0.667
Transit to OBS SG27A				
Recovery	DM_RC	Sun 4. Dec 20:25	Sun 4. Dec 22:06	1.683
Recovery of OBS SG27A				
Transit	SB_TRT	Sun 4. Dec 22:06	Sun 4. Dec 24:00	1.900
Transiting to Source Deployment location and Magnetometer Cal Site.				



12/4/2016

Page 2

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

4-Dec	Hours	% Percent
Chargeable Standby	9.083	37.847
Transit	9.083	37.847
Demobilisation	14.917	62.153
Recovery	14.917	62.153
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	192.067	18.188
Cetacean	1.033	0.098
Field Operations	28.117	2.663
Reconfiguration	8.883	0.841
Cable Reconfig	8.883	0.841
Transit	154.033	14.586
DownTime	35.650	3.376
Cetacean	21.067	1.995
Recording	10.317	0.977
Source	4.133	0.391
Vessel	0.133	0.013
Mobilisation	86.700	8.210
Deployment	31.817	3.013
Mob Ashore	43.350	4.105
Testing	6.000	0.568
Transit to Prospect	5.533	0.524
Acquisition	651.917	61.735
Prime Line Change	53.350	5.052
Production Infill	3.417	0.324
Production Prime	595.150	56.359
Demobilisation	89.667	8.491
Recovery	89.667	8.491
Total	1056.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 04 Dec

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report



12/4/2016

Page 3

Daily Comment Summaries - Personnel Onboard

Sun 04 Dec

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jenvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

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Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

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Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged

97%

Prime Lines Completed

90%

Preplot Lines	Complete	Incomplete	Pending
42	38	0	0

Percentages Charged

Prime	96.68% of 5065.57 km (Sail Line)
-------	----------------------------------

Average Daily Production

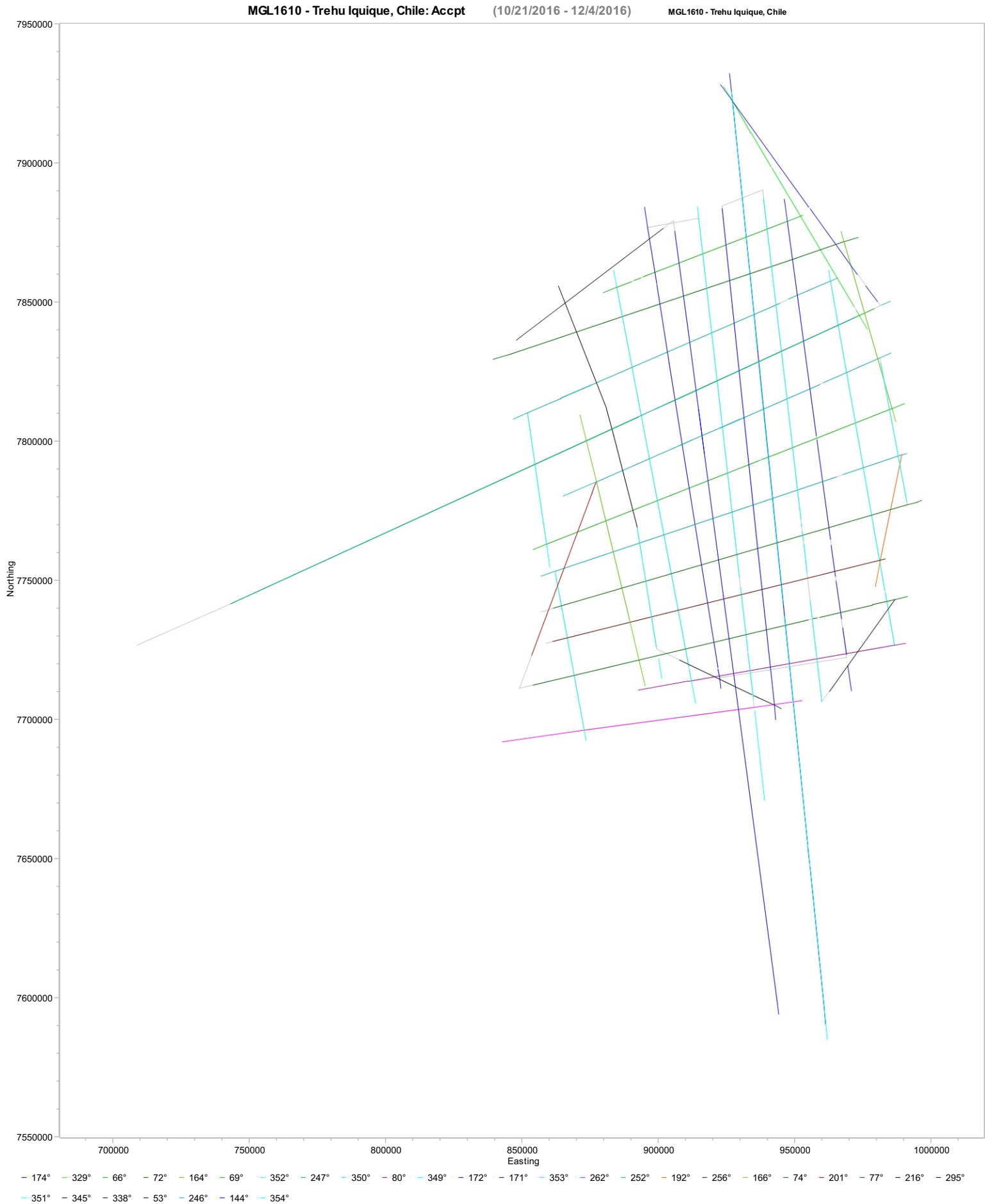
Average Accepted Daily Production	133.89 km
Average Charged Daily Production	132.36 km

Production Day By Day (Chgd km) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
------	--------	-----------------------	------------

Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	0.00	151.75	0.00	4880.13
Infill	0.00	0.00	0.00	15.75
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	0.00	151.75	0.00	4937.40
Total				
Prime	0.00	151.75	0.00	4880.13
Infill	0.00	0.00	0.00	15.75
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	0.00	151.75	0.00	4937.40





Daily Science Report

12/5/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Mon 05 Dec

The Vessel started the continuing it's transit back down Line OBS01 to the west. At 05:21 UTC the vessel will slow down and start deploying the source sub-array. The Source was deployed at 06:28 UTC and the vessel started the Magnetometer Calibration figure eight on the west end of Line OBS01. This calibration concluded at 10:01 UTC. At 10:08 UTC the safety radius had been cleared by the PSO's and the vessel will started ramping up the source. At 10:40 UTC ramp up was complete and the vessel made it way towards the start of line. At 12:13 UTC the vessel began production on the extended Run-out to Line OBS01 to the west, which continued until 18:51 UTC. The vessel then recovered the source which was on-board at 19:52. The vessel then started its transit back to OBS21 and resumed OBS recovery operation at 23:00 UTC. The vessel should continue OBS Recovery operations throughout the rest of the day.

Daily Comment Summaries - Plan for Tomorrow

Mon 05 Dec

The vessel will start the day continuing OBS recovery operations. It is expected that the last OBS will be on-board at ~13:00 UTC and the vessel will start making it way towards Arica, Chile to begin demobilization efforts. ETA Arica is ~11:00 UTC on the morning of the 7th of Dec.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Transit	SB_TRT	Mon 5. Dec 00:00	Mon 5. Dec 05:30	5.500
Transiting to Source Deployment location and Magnetometer Cal Site.				
Deployment	MB_DP	Mon 5. Dec 05:30	Mon 5. Dec 06:28	0.967
Deployment of Source for Extension Run-outs to Line OBS01				
Calibrations	SB_CA	Mon 5. Dec 06:28	Mon 5. Dec 10:08	3.667
Performing a Magnetometer Figure Eight Calibration.				
Cetacean	SB_CT	Mon 5. Dec 10:08	Mon 5. Dec 10:40	0.533
Ramp Up of Source				
Transit	SB_TRT	Mon 5. Dec 10:40	Mon 5. Dec 12:13	1.550
Transit to Line MGL1610EX01				
Production Infill	AC_PI	Mon 5. Dec 12:13	Mon 5. Dec 12:30	0.283
SOL Seq 43 MGL1610EXT01 FGSP=89991 Hdg=246.7° Infill EOL Seq 43 MGL1610EXT01 LGSP=90000 Complete SOL Water Depth=4668m				
Production Prime	AC_PP	Mon 5. Dec 12:30	Mon 5. Dec 18:51	6.350
SOL Seq 43 MGL1610EXT01 FGSP=90001 Hdg=246.7° Prime EOL Seq 43 MGL1610EXT01 LGSP=90251 Complete EOL Water Depth=4580m				
Recovery	DM_RC	Mon 5. Dec 18:51	Mon 5. Dec 19:52	1.017
Recovery of Energy Source, PAM and Maggie.				
Transit	SB_TRT	Mon 5. Dec 19:52	Mon 5. Dec 23:00	3.133
Transit to OBS SS21				
Recovery	DM_RC	Mon 5. Dec 23:00	Mon 5. Dec 24:00	1.000
Recovery of OBS SS21				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

5-Dec	Hours	% Percent
Acquisition	6.633	27.639
Production Infill	0.283	1.181
Production Prime	6.350	26.458
Chargeable Standby	14.383	59.931
Calibrations	3.667	15.278
Cetacean	0.533	2.222
Transit	10.183	42.431
Demobilisation	2.017	8.403
Recovery	2.017	8.403
Mobilisation	0.967	4.028
Deployment	0.967	4.028
Day's Total	24.000	100.000



12/5/2016

Page 2

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	206.450	19.116
Calibrations	3.667	0.340
Cetacean	1.567	0.145
Field Operations	28.117	2.603
Reconfiguration	8.883	0.823
Cable Reconfig	8.883	0.823
Transit	164.217	15.205
DownTime	35.650	3.301
Cetacean	21.067	1.951
Recording	10.317	0.955
Source	4.133	0.383
Vessel	0.133	0.012
Mobilisation	87.667	8.117
Deployment	32.783	3.035
Mob Ashore	43.350	4.014
Testing	6.000	0.556
Transit to Prospect	5.533	0.512
Acquisition	658.550	60.977
Prime Line Change	53.350	4.940
Production Infill	3.700	0.343
Production Prime	601.500	55.694
Demobilisation	91.683	8.489
Recovery	91.683	8.489
Total	1080.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 05 Dec

Navigation:

rGPS Pod on Sub-Array 3 not operational due to open wires in Source Bundle.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Miscellaneous:

No Major Issues to Report



12/5/2016

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Daily Comment Summaries - Personnel Onboard

Mon 05 Dec

Technical Staff On-board the Langseth

Robert Steinhaus LDEO OMO Chief Science Officer
David Martinson LDEO OMO Science Officer – Nav/IT
Todd Jensvold LDEO OMO Science Officer - Acq
Tom Spoto LDEO OMO Chief Source Mechanic
Alan Thompson LDEO OMO Marine Technician - Nav/IT
Gilles Guerin LDEO OMO Marine Technician - Acq/IT
Josh Kasinger LDEO OMO Marine Technician Source
Roberto Henriquez Atlas Personnel Source - Contractor
Andrej Smiscal Atlas Personnel Compressor Mech -Contractor

PSO Staff On-board the Langseth

Cassandra Frey RPS Lead PSO
Brooke Stanford RPS PAM operator / PSO
Karla Rios RPS PSO
Yessica Vincenzo RPS PSO
Belen Sharon Torres RPS PSO

Science Party On-board the Langseth

Anne Trehu Oregon State Un. Chief Scientist
Emilio Vera Un. Chile Santiago Co-chief
Michael Riedel GEOMAR Co-chief
Florian Petersen GEOMAR Technician/engineer
Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
Felipe Gonzalez Rojas Un. Chile Santiago Graduate student
Sara Hussni - Alhisni GeoAzur Graduate student
Jan Handel Free Un. Berlin Graduate student

Survey Progress (MGL1610 - Trehu Iquique, Chile)

Percentage of Prime Charged

97%

Prime Lines Completed

93%

Preplot Lines	Complete	Incomplete	Pending
42	39	0	0

Percentages Charged

Prime	97.42% of 5065.57 km (Sail Line)
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Average Daily Production

Average Accepted Daily Production	131.35 km
Average Charged Daily Production	129.86 km

Production Day By Day (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Date	Vessel	First - Last Sequence	Production
Mon 5 Dec	Marcus G Langseth	43 - 43	38.98
Total Production:			38.98

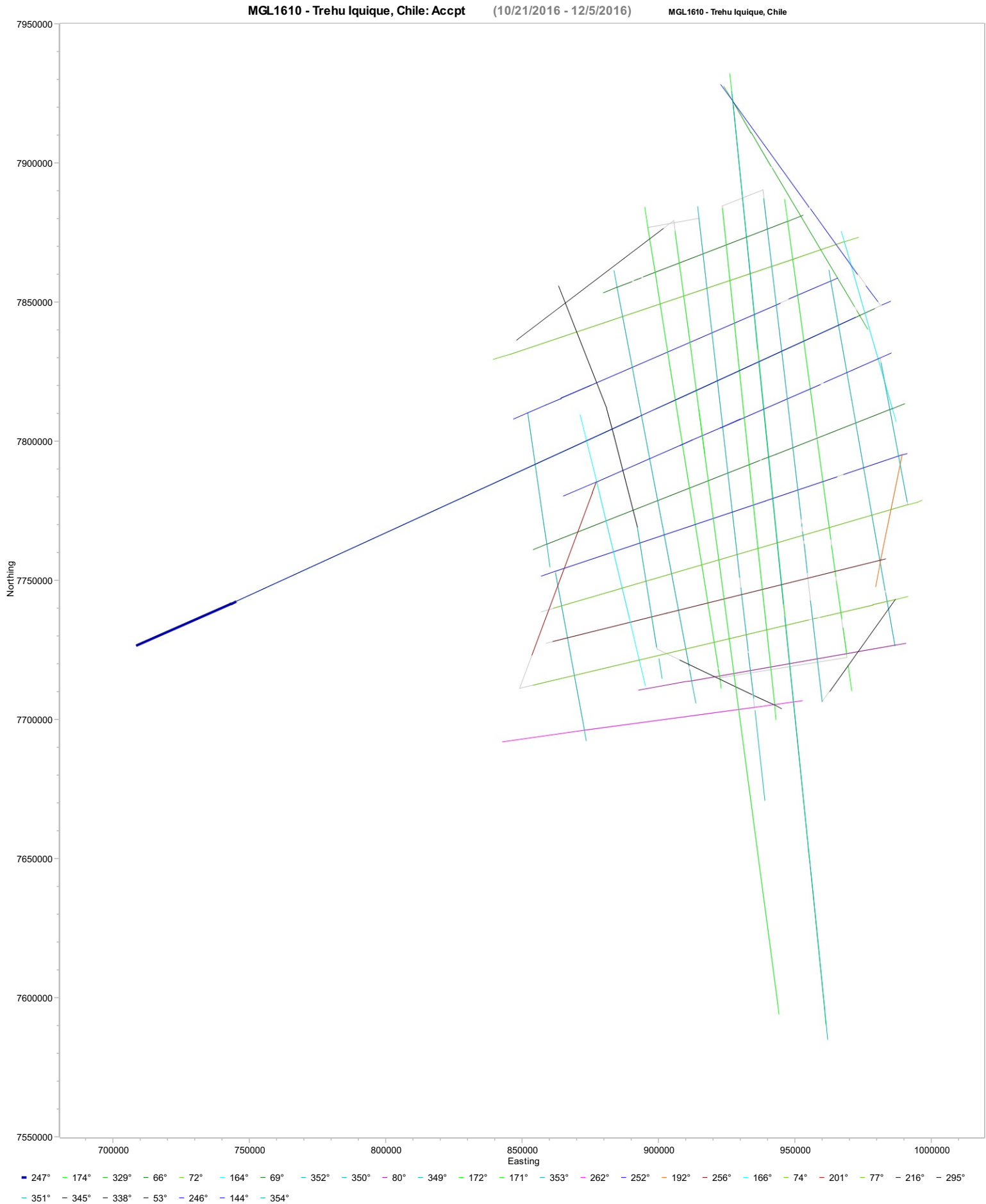
Production Totals (Chgd km by interval) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Marcus G Langseth				
Prime	37.50	37.50	37.50	4917.63
Infill	1.48	1.48	1.48	17.23
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	38.98	38.98	38.98	4976.38
Total				
Prime	37.50	37.50	37.50	4917.63
Infill	1.48	1.48	1.48	17.23
Infill, Reshoot	0.00	0.00	0.00	24.30
Prime, Reshoot	0.00	0.00	0.00	17.23
Combined	38.98	38.98	38.98	4976.38



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Daily Science Report

12/6/2016

Page 1

Client: United States National Science Foundation
Job No: MGL1610
Block: MGL1610 - Trehu Iquique, Chile
Client Contact: Dr. Anne Trehu
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL1610
Vessel: Marcus G Langseth
Vessel Supervisor: Paul Ljunggren
Party Chiefs: Robert Steinhaus /David Martinson/ Todd Jensvold
Client Reps:

Daily Comment Summaries - Daily Summary

Tue 06 Dec

The vessel started the day continuing OBS recovery operations. At 12:50 UTC all OBS had been successful recovered and the Vessel started its transit towards Arica, Chile.

At OBS Stations SS21 and SS26 - The Crew deployed a single NOAA Argo float.

The vessel will start the day continuing OBS recovery operations. It is expected that the last OBS will be on-board at ~13:00 UTC and the vessel will start making it way towards Arica, Chile to begin demobilization efforts. ETA Arica is ~11:00 UTC on the morning of the 7th of Dec.

Daily Comment Summaries - Plan for Tomorrow

Tue 06 Dec

The Vessel will state the day continuing the transit towards Arica, Chile to begin demobilization efforts ashore. The vessel approximate ETA to Arica is 11:00 UTC. The vessel should be along side throughout the rest of the day.

Timing Diary (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Code	Start	End	Duration
Recovery	DM_RC	Tue 6. Dec 00:00	Tue 6. Dec 00:42	0.700
Recovery of OBS SS21				
Transit	SB_TRT	Tue 6. Dec 00:42	Tue 6. Dec 01:35	0.883
Transit to OBS SS22				
Recovery	DM_RC	Tue 6. Dec 01:35	Tue 6. Dec 03:17	1.700
Recovery of OBS SS22				
Transit	SB_TRT	Tue 6. Dec 03:17	Tue 6. Dec 04:08	0.850
Transit to OBS SS23				
Recovery	DM_RC	Tue 6. Dec 04:08	Tue 6. Dec 05:28	1.333
Recovery of OBS SS23				
Transit	SB_TRT	Tue 6. Dec 05:28	Tue 6. Dec 06:17	0.817
Transit to OBS SS24				
Recovery	DM_RC	Tue 6. Dec 06:17	Tue 6. Dec 07:40	1.383
Recovery of OBS SS24				
Transit	SB_TRT	Tue 6. Dec 07:40	Tue 6. Dec 08:33	0.883
Transit to OBS SS25				
Recovery	DM_RC	Tue 6. Dec 08:33	Tue 6. Dec 10:15	1.700
Recovery of OBS SS25				
Transit	SB_TRT	Tue 6. Dec 10:15	Tue 6. Dec 11:10	0.917
Transit to OBS SS26				
Recovery	DM_RC	Tue 6. Dec 11:10	Tue 6. Dec 12:50	1.667
Recovery of OBS SS26				
Transit From Prospect	DM_TF	Tue 6. Dec 12:50	Tue 6. Dec 24:00	11.167
Transit to Arica, Chile to begin Demobilization ashore.				

Timing Day By Day (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

6-Dec	Hours	% Percent
Chargeable Standby	4.350	18.125
Transit	4.350	18.125
Demobilisation	19.650	81.875
Recovery	8.483	35.347
Transit From Prospect	11.167	46.528
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1610 - Trehu Iquique, Chile)

Category	Hours	% Percent
Chargeable Standby	210.800	19.094
Calibrations	3.667	0.332
Cetacean	1.567	0.142
Field Operations	28.117	2.547
Reconfiguration	8.883	0.805
Cable Reconfig	8.883	0.805



Category	Hours	% Percent
Transit	168.567	15.269
DownTime	35.650	3.229
Cetacean	21.067	1.908
Recording	10.317	0.934
Source	4.133	0.374
Vessel	0.133	0.012
Mobilisation	87.667	7.941
Deploy ment	32.783	2.970
Mob Ashore	43.350	3.927
Testing	6.000	0.543
Transit to Prospect	5.533	0.501
Acquisition	658.550	59.651
Prime Line Change	53.350	4.832
Production Infill	3.700	0.335
Production Prime	601.500	54.484
Demobilisation	111.333	10.085
Recovery	100.167	9.073
Transit From Prospect	11.167	1.011
Total	1104.000	

Daily Comment Summaries - Daily Comments On Status of Equipment

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12/6/2016

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Ernest Aaron SIO/OBSIP Technician/engineer
Mark Gibaud SIO/OBSIP Technician/engineer
Josh Manger SIO/OBSIP Technician/engineer
Kathy Davenport Oregon State Un. Post-doc
Emma Myers Un. Washington Graduate student
Carsten Lehman GEOMAR Graduate student
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